THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. LIX. SATURDAY, AUGUST 1, 1891. No. 5.

ORIGINAL ARTICLES.

MOTOR DISTURBANCES OF THE STOMACH.[1]

BY CHARLES G. STOCKTON, M.D.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE AND OF CLINICAL MEDICINE, MEDICAL DEPARTMENT OF THE UNIVERSITY OF BUFFALO; PHYSICIAN TO THE BUFFALO GENERAL HOSPITAL.

THE object of this note is to re-state the importance of the systematic study of gastric disorders. The symptoms produced by the various indigestions naturally arrange themselves into those of unnatural sensations, abnormal secretions, and irregular movements. Of these last, those that are dependent upon functional rather than upon structural fault are here considered.

Possibly too little attention is given to the question of the gastric movements in the process of digestion. Our efforts are more often put forth for the correction of faulty secretion, but good thus accomplished is often produced by effects upon the motor functions of the organ. For instance, in infancy, children frequently regurgitate milk soon after nursing, and this to such an extent that the child suffers from inanition. It is noticed that the milk returned is curdled and acid in reaction; the fault is attributed to an acid stomach, and alkalies are given, with consequent relief. Now, probably in such cases the stomach is not too acid, but rather the cardiac orifice relaxes, and when the normal peristalsis of the stomach occurs regurgitation of the food takes place. The effect of the antacid, lessening the stimulation to the gastric walls, is followed by a weaker peristalsis; the cardiac opening does not relax under the weakened pressure, and the trouble abates. A similar condition of affairs takes place in adult life, and many persons suffering from what they call sour stomach will, upon careful investigation, be found not victims of true pyrosis, but rather of weakness of the cardiac orifice which permits too easy regurgitation of the stomach-contents. It is to be understood that when the movements of the stomach are properly balanced, there may be sufficient stimulus from fermentation, or other abnormal conditions of the gastric contents, to produce unnaturally strong peristalsis, and hence regurgitation. In such cases, the food returned will be very irritating, probably very acid, and will be accompanied by other symptoms than those of motor disturbance.

[1] Read before the Medical Association of Central New York, June, 1891.

In other cases it will be found that the gastric contents are excessively acid in reaction, and so irritating as to produce gastric catarrh, and yet regurgitation does not take place. In other words, the cardiac orifice once closed remains securely locked, and fails to open to any degree of pressure or stimulation from below. Hence patients may suffer from sour stomach and not know it; and, on the other hand, paradoxical as it may seem, may be actually free from pyrosis while yet complaining of acid eructations. I have reported one case in which a young woman was reduced to the verge of starvation from the continued return of food, and this without any other apparent disturbance of digestion; without nausea, without vomiting—quite after the manner of the ruminant.

Your attention is invited now to similar perversions in the behavior of the pyloric orifice. All of us are familiar with lienteric diarrhea, and frequently have had patients complaining that immediately after eating they were hurried from the table by an urgent desire to evacuate the bowels. On inspection of such alvine discharges, the food is found to be but little changed, and, as a result of this, nutrition fails, as is evidenced by the loss of flesh and the accompanying nervous phenomena. Efforts to correct this by ordinary remedies for diarrhea are attended with poor success, but remedies directed toward calming the peristalsis and strengthening the pylorus, if administered immediately before meals, will result in removing the difficulty. The cause of this diarrhea is doubtless a weakened pylorus. It usually occurs in neurotic individuals the digestion of whom is without fault, except in this simple irregularity of the gastric movements. In these cases, there must also exist a similar disorder in the intestinal movements, which is fortunate, for the reason that it points out the seat of trouble. I have seen several cases in which the stomach was completely emptied of a hearty meal within an hour after its ingestion. This food cannot be sufficiently prepared for entrance into the intestine; its presence there must create intestinal disorders, and, in fact, is a common cause of duodenal indigestion and intestinal catarrh.

On the other hand, the pylorus refuses to relax at that proper period of digestion and of time appointed by Nature. Such a condition is illustrated by a case that I now have under observation. This young man has a good appetite, eats heartily, suffers no

distress for several hours after his meal; then he feels a sense of weight and fulness in the epigastrium, general nervousness, and sometimes gastric pain preventing sleep and business pursuits; these symptoms are entirely relieved by emptying the stomach by means of a tube. If this procedure is carried out not too long after eating, the meal is found to be properly digested, apparently ready for passage onward; if too long after a meal, an excess of fluid is found. Before treatment, this disturbance had led to a somewhat acute dilatation, and, indeed, on several occasions three quarts of fluid were removed from his stomach at once, after which he was perfectly comfortable, and ready for another meal. Not only was there abnormal tightness of the pylorus, but doubtless of the cardia likewise, for through his thin abdominal wall the violent gastric movements could be plainly observed in slow, strong undulations; the stomach evidently vainly struggling to empty itself. The bowels were constipated, the skin dry, the urine scant, not albuminous (save a faint trace by picric acid), but containing hyaline and granular casts in large number. Treatment directed to the nervous system, to lessening the arterial tension, and to stimulating the skin, with very little local treatment of the stomach, quickly relieved his symptoms. The stomach resumed its natural size, defecation became regular and natural, the urine became normal, and, according to my own scales, he gained fourteen pounds in ten days. I have no doubt that this condition to some extent explains the cases of marked dilatation of the stomach not depending upon stenosis in the ordinary sense of that term.

This seems a proper time to speak of the want of gastric peristalsis which so often results in retarded digestion, and occasionally gastrectasia. In the majority of cases of gastric dilatation coming under my observation there has been great atony of the walls with almost complete absence of movement. In advanced cases the tight closure of the orifices is not seen, gas is passed freely upward, and I have no doubt the fluid contents would pass easily downward but for the fact that the stomach is dilated into a great sac, lying so far below the pylorus that, without gastric movements, complete emptying of the organ is not naturally effected. Time does not permit of the consideration of vomiting, spasm of the stomach, and irregular peristalsis, which might properly be treated under this head. I have only time to speak briefly of the management of these cases. The measures employed in their treatment consist in careful diet, regulation of the gastric stimulation, the application of electricity by means of the gastric electrode[1] in the manner hitherto described, and abdominal massage.[1] Satisfactory results have been obtained by these means, and greater attention to them, I feel certain, would not be misdirected.

[1] Medical Record, November 9, 1889.

A FEW THOUGHTS ON THE TECHNIQUE OF HYSTERECTOMY.[2]

BY JOSEPH EASTMAN, M.D.,
PRESIDENT, AND PROFESSOR OF DISEASES OF WOMEN AND ABDOMINAL SURGERY, CENTRAL COLLEGE OF PHYSICIANS AND SURGEONS, INDIANAPOLIS.

THE frequent occurrence of pathological conditions demanding the removal of the uterus would seem to make "the technique of hysterectomy" of special interest at the present time. Since the publication of my paper in the *Indiana Medical Journal*, and its translation into German ("Memorabilien," *Zeitschrift für rationelle praktische Aerzte*, July, 1890), I have received letters from several distinguished members of the profession seeking more definite information in regard to my method of hysterectomy. This has induced me to present these few thoughts and report additional illustrative cases.

First, let us consider the operation by abdominal section for fibroma. The important question is as to the treatment of the pedicle. Treat it extraperitoneally? Yes. But shall that be in an abdominal or in a vaginal wound? In conversation with Dr. Bantock in his office in London, I learned that this distinguished advocate of fastening the pedicle in the lower angle of the wound had, like myself, found cases of multinodular fibroma in which the new-growths filled the pelvis, disorganizing broad ligaments and the uterine cervix to such an extent that no pedicle could be formed. He deals with these cases by enucleation, packing with gauze and draining through the abdominal wound, after having fastened the serous covering of the pelvis to the serous lining of the abdominal wall. There can be no cut-and-dried method applicable to every case. Each is a law unto itself. In the following three cases, as well as in those reported in the previous paper, no pedicle whatever could be formed which could be brought up and fixed in the lower angle of the wound. For this reason one of the cases had been rejected by a good operator. The suggestion to enucleate the fibrous nodules and then make a pedicle could not have been carried out in these cases, as the elastic ligature would have cut off the top of the vagina, or would not have been low enough to include healthy tissue be-

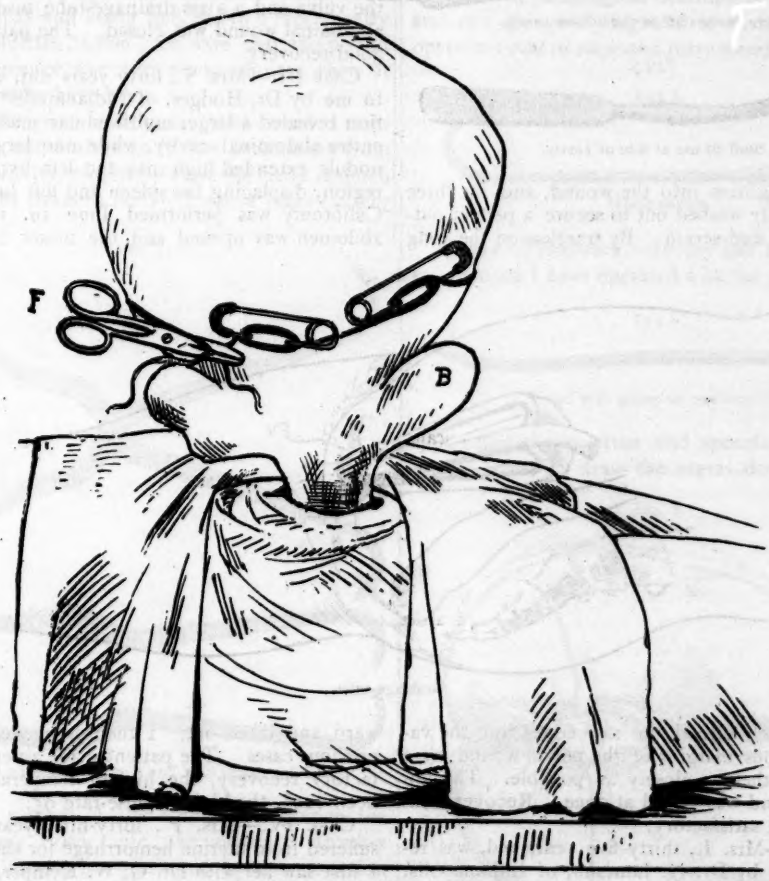
[1] The American Journal of the Medical Sciences, July, 1890.

[2] Based on an experience of 245 abdominal sections, 53 of which were hysterectomies. Read before the Gynecological Section of the American Medical Association, Washington, D.C., May 6, 1891.

low the cavities from which the fibrous nodules had been enucleated. To leave pockets without drainage would be bad surgery.

CASE I.—Mrs. H., forty-five years old, was the mother of three children. She was referred to me by Dr. Evans, of Greencastle. Following an attack of la grippe, her health began to decline. When I saw her, four months later, the symptoms pointed to the existence of an abdominal tumor that filled the pelvis, extending up into the abdomen as high as the umbilicus. Celiotomy was performed May 8, 1890. The tumor was lifted forward, out of the abdomen. There were nodular masses, as large as the fist, well down in both broad ligaments, and one nodular mass, as large as a hen's egg, between the bladder and uterus. These nodular masses prevented my raising the tumor out of the pelvis. With an elastic ligature of rubber-tubing, kept from slipping up or down by pins at various places on the surface of the tumor, I encircled the tumor below the point where it was deemed best to sever it. (See Fig. 1.) The surface of the tumor was wrapped with the Esmarch bandage to diminish its circulation. Having been careful to apply the elastic ligature, the bulk of the tumor above the ligatures was then cut away so as to leave sufficient peritoneum to cover the enormous wound. I then opened the capsule of the tumor. Applying the forceps to arrest hemorrhage, I enucleated the nodular masses from beneath the ligature, which, contracting as I removed each mass, unpuckered the outer layers (mostly composed of hypertrophied uterine fibre) like a purse-string. My staff (Fig. 2) was then passed into the vagina to a position behind the cervix uteri and below the elastic ligature. Then, cutting upon the groove of the staff, I began ligating and cutting; as the staff had located the cervix I was enabled to extirpate it without interference with the ureters. A considerable portion of the anterior wall of the body of the uterus was left, as it was in such close contact with the bladder that its removal was deemed inadvisable. As the ovaries and tubes were much diseased, I tied them off. The ligatures, twenty-five in number, were left eight inches in length, and twisted

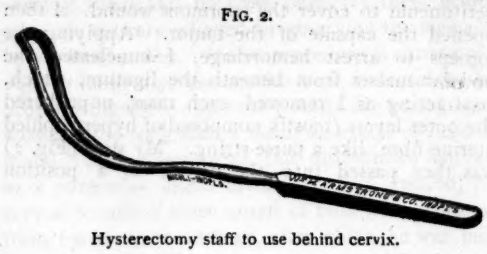
FIG. 1.



B, bladder. *F*, safety-pinning elastic ligature.

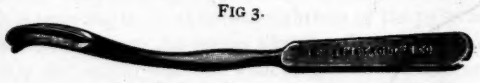
into one cord. A pair of forceps was then passed into the vagina, the ligatures grasped and drawn out of the vulva. A glass drainage-tube was then

FIG. 2.



Hysterectomy staff to use behind cervix.

FIG 3.



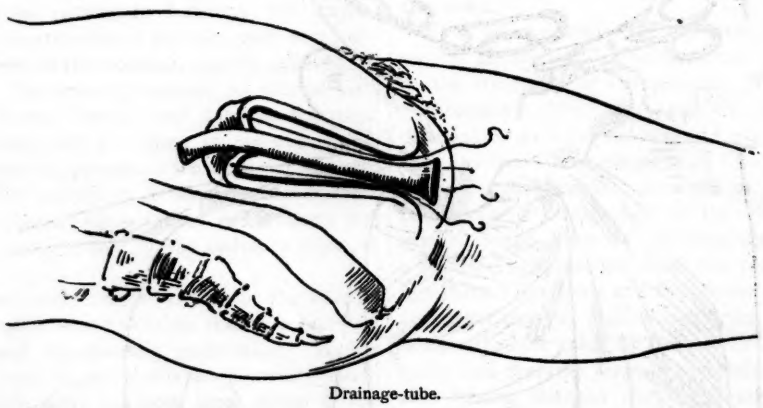
Staff to use at side of cervix.

passed per vaginam into the wound, and for three days frequently washed out to secure a perfect outflow of blood and serum. By traction on the long ligatures, which turned the raw edges into the vagina, the serous margins of the pelvic wound were brought together as closely as possible. The abdominal wound was closed at once. Recovery was complete and satisfactory.

CASE II.—Mrs. I., thirty-five years old, was referred to me by Dr. H. Jameson, of Indianapolis. When first examined she gave the following history: There had been loss of weight and strength for the past two years. She had had no marked hemorrhages. Physical examination revealed the pelvis completely filled by a hard, fibrous tumor so situated that the cervix uteri was with difficulty found, being high up behind the os pubis, and well to the right side. The tumor also occupied the abdominal cavity as high as the umbilicus. I used electricity for some three months, employing as strong constant currents as the patient could bear. The patient became disgusted with the treatment. Celiotomy was performed May 20, 1890. The abdomen having been opened, the tumor was encircled as in Case I. I then opened the capsule of the tumor, and enucleated from the posterior uterine wall a mass as large as an ordinary human head. Several bleeding-points in the capsule were caught with forceps. My staff was then passed into the vagina, held closely behind the cervix and cut upon. As the staff was withdrawn, I inserted my finger into the opening; then by ligating and cutting, the remaining portion of the uterus and capsule of the tumor were removed. The peritoneal margins of the wound were brought together; the ligatures, having been left long, were drawn out of the vulva and a glass drainage-tube inserted. The abdominal wound was closed. The patient made a good recovery.

CASE III.—Mrs. S., forty years old, was referred to me by Dr. Hodges, of Indianapolis. Examination revealed a large, multinodular mass filling the entire abdominal cavity, while one large subserous nodule extended high into the left hypochondriac region, displacing the spleen and left lung upward. Celiotomy was performed June 19, 1890. The abdomen was opened and the tumor brought forward and lifted out. I then proceeded as in the previous cases. The patient made an entirely satisfactory recovery, the highest temperature having been 100°, the highest pulse-rate 95.

FIG. 4.



Drainage-tube.

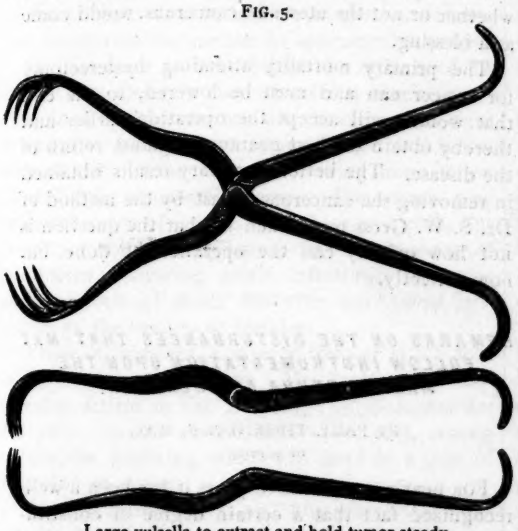
CASE IV.—Mrs. P., forty-nine years old, had suffered from uterine hemorrhage for thirteen years. I first saw her with Dr. G. W. Kemper, of Muncie, Ind., when I found and removed a sloughing fibroid mass that would have filled a quart bowl. The uterus seemed to contract, but could be distinctly felt between the umbilicus and the pubes. The hemorrhages did not return for six months; during this time she enjoyed good health. Soon after the return of the hemorrhages, another mass, as large as a goose-egg, was forced into the vagina and removed by Dr. Leavens, of Middletown, then her medical attendant. On my return from Europe, in October, I learned that the hemorrhages had not ceased, whereupon I removed the uterus as in the three previous cases. The mass removed was as

large as my doubled fists. The inner surface of the uterus was covered with bleeding, fungous growths; that, in the absence of a discharge of fibrous fragments and blood for thirteen years, would be strong clinical evidence of malignant degeneration. The patient made a good recovery. The second specimen[1] was removed by my method, with the recovery of the patient. Dr. Lovett, of Goodland, Ind., was her medical attendant.

In the last two cases, a pedicle could have been formed to fasten in the abdominal wound. Still, the women, in my opinion, were less mutilated and the abdominal wall being free, are in a more nearly normal condition, while I am sure that the period of convalescence was two weeks shorter than it would otherwise have been.

One of the greatest dangers to be avoided consists in the contamination of the peritoneum from the uterine cavity, especially when the latter is much enlarged and contains fluid. I use a large cautery

FIG. 5.



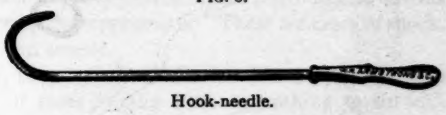
Large vulsella to extract and hold tumor steady.

to cut the surface of the stump and plunge the cautery freely down into the vagina. Another source of difficulty is constituted by the retraction and obliteration of the vaginal portion of the cervix, when the tumor is lifted out of the abdomen. I have, in two cases, been unable with my finger to find the cervix in the vagina. By passing the sound down the cervical canal I located the cervix to one side, where from other evidence it was least expected. I am still encouraged in my belief that, when the teaching shall have become obsolete that these tumors are comparatively free from danger and give little or no trouble after the menopause, we shall deal with the small tumors by removal of the uterine appendages, and with the larger ones by extirpation, and have as low a rate of mortality as we now have in removing ovarian tumors.

We cannot hope to reach this much-desired Mecca in our surgical pilgrimage if we stick to some buckram rule in operating and ignore the fact that the *peculiarities of tumor and pedicle* should determine our method of procedure.

Fortunate is he who can comprehend the anatomical and pathological bearings in a given case, and can *use good judgment* at every step of the operation *and in each and every emergency.*

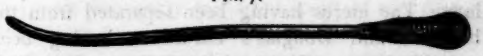
FIG. 6.



Hook-needle.

Vaginal Extirpation.—In my last twenty vaginal extirpations I have operated with the patient on the

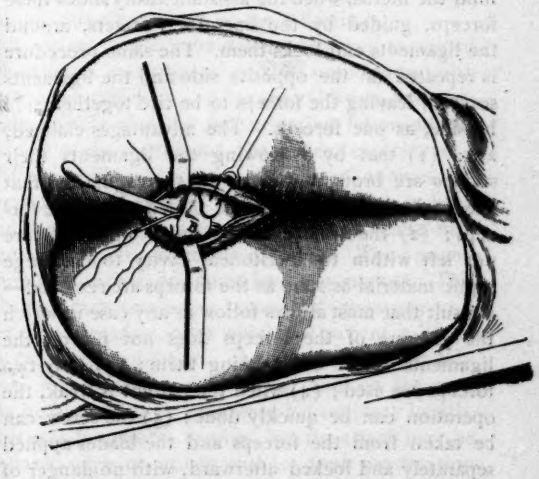
FIG. 7.



Sound with grove on concave side.

side, using the position and speculum of the immortal Sims. I draw the uterus down very little.

Fig. 8.



I sometimes use ligatures alone, sometimes forceps, being governed by the circumstances in a given case. When ligatures are used, I first separate the uterus from the bladder and then open Douglas's pouch.

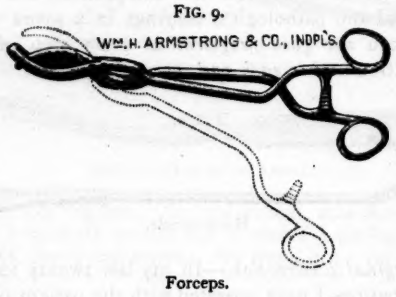
The hook-needle (Fig. 6), with the ligature, is then passed around the broad ligaments and the

[1] Specimens not shown, though present, as the discussion was cut off for want of time.

ligatures are tied. By the aid of this grooved sound (Fig. 7), the now constricted broad ligaments can be easily fixed and cut, three or four ligatures on each side being sufficient to secure the vessels. (See Fig. 8.) The ends of the ligatures are left long that they may assist in the drainage of each and every part of constricted tissue.

One advantage of the ligature is that an ovary or tube may be easily brought down and removed, no forceps obstructing the way.

FIG. 9.



Forceps.

When forceps (Fig. 9) are used, I proceed as follows: The uterus having been separated from the bladder, and Douglas's cul-de-sac having been opened, a strong ligature is passed around the ligaments by means of the "hook-needle" (cautiously avoiding the intestines); this ligature being tied, the ligaments are constricted to a round mass. The operator than passes the index finger of one hand behind the uterus, when the assistant easily slides these forceps, guided by the operator's fingers, around the ligaments and locks them. The same procedure is repeated on the opposite side and the ligaments severed, leaving the forceps to be tied together, side by side, as one forceps. The advantages claimed, are: (1) that by narrowing the ligaments their stumps are brought down into the vagina, so that the peritoneal cavity can be closed above the forceps; (2) the stumps of the broad ligaments are not left within the peritoneal cavity to discharge septic material as soon as the forceps are removed—a result that must always follow in any case in which the pressure of the forceps does not narrow the ligaments before compressing them; (3) only two forceps are used; (4) when the patient is weak, the operation can be quickly done; (5) the screw can be taken from the forceps and the blades applied separately and locked afterward, with no danger of hemorrhage, when they have been left forty-eight hours.

Whether ligatures or forceps are used the *stump must be treated extra-peritoneally.* The serous margins of the wound must be brought nicely together between the two pedicles. The utmost care in cleansing the pelvis and adjusting the parts is as necessary here as after abdominal section. A small drainage-tube may be used if necessary. It is astonishing to me that the results have been as good as they have, when putrid fragments from the pinch of many forceps have been left to contaminate the peritoneal surface of the pelvis and intestines. When the technique shall have been perfected, the mortality will be lowered and the field for the operation surely widened. We had better occasionally remove a uterus not yet cancerous, when the organ is rendering the patient an invalid, than wait until the perimetrium is involved. Again, there are many women with complete prolapsus, wearing supports and working for the support of themselves and families; women with retroverted uteri, complicated with prolapsed and adherent ovaries; women with hystero-neuroses, approaching a lingering menopause, with a history of insanity in their families—morphine-poisoned, nerve-wrecked, brain-shattered, reason-dethroned, asylum-homed—to whom a vaginal extirpation of the uterus, without regard as to whether or not the uterus be cancerous, would come as a blessing.

The primary mortality attending hysterectomy for cancer can and must be lowered, to the end that women will accept the operation earlier and thereby obtain the best guarantee against return of the disease. The better secondary results obtained in removing the cancerous breast by the method of Dr. S. W. Gross must teach us that the question is not how quickly can the operation be done, but how perfectly.

REMARKS ON THE DISTURBANCES THAT MAY FOLLOW INSTRUMENTATION UPON THE MALE URETHRA AND BLADDER.

BY PAUL THORNDIKE, M.D.,
OF BOSTON.

FOR nearly one hundred years it has been a well-recognized fact that a certain degree of constitutional disturbance is apt to follow the introduction of an instrument into the male urethra. This disturbance, varying as it does in intensity, and manifesting itself by different sets of symptoms in different cases, has received a variety of different names, and has been the subject of much speculation and of a great deal of painstaking investigation. Under the names catheter chill, catheter fever, urethral fever, and urinary fever, various conditions have been described, various classifications of these conditions have been made, and various ideas as to the causation of the disturbance have been advanced. In this way there has naturally arisen considerable confusion as to what clinical condition is meant when one or the other of these various terms is employed.

It has seemed to the writer that this confusion was

largely a verbal one, and that the conclusions reached by various observers in reality agreed very well. It is the object of these notes merely to make a simple classification of the different conditions as they exist clinically, and to speak briefly of each one. Looking at the matter purely from its clinical aspect, we find that all cases can readily be grouped under a few headings.

I. *Cases of "Shock."*—We are all familiar with the condition that is commonly spoken of as "catheter chill." After instrumentation upon urethra or bladder, especially if it be the patient's first experience of the sort, he becomes faint, and may completely lose consciousness, or he is seized with one or more short rigors. This attack is accompanied by little or no fever, passes off in a few moments, and, as a rule, is followed by no bad result of any kind. The attack comes directly or very shortly after the passage of the instrument, is of short duration, and is followed by little, if any, constitutional distubance. The attack is also more likely to occur and to occur with greater violence the deeper into the urethra the instrument is passed.

Of this form of disturbance but little need be said. It is clearly a case of nervous shock occurring in a healthy person; that is to say, the rigor is a physiological one, occasioned by the local irritation of the instrument, and following more or less immediately upon its passage. The attack may take the form of a fainting-spell or of a chill, but it is not followed by any symptom or group of symptoms indicating septic infection. It is the simplest form of shock following mechanical irritation of the urethra or bladder.

There is, however, a severer form of shock that is fortunately much rarer. Mr. Banks, in an admirable article in the *Edinburgh Medical Journal* for 1871, reports several such cases, and, among others, the following, which will serve as a type of this class of cases:

"A man between forty and fifty years of age was admitted to the Liverpool Royal Infirmary for urethral obstruction. A false passage was found, but a catheter (6–7 English) was, without any undue violence, passed into the bladder. There was very little pain, no bleeding, and nothing to indicate any lesion of the urethra other than the preëxisting false passage. Almost immediately after the entrance of the catheter into the bladder, the patient was seized with a severe rigor. The instrument was cautiously withdrawn, but the patient became profoundly collapsed and died in a few moments. In this case no autopsy was allowed, but there are recorded many such cases in which the autopsy showed no lesion to account for the fatal issue. More or less advanced renal disease is, however, often found at the autopsy in these cases. This, then, is an example of the severest form of urethral shock."

In different cases there may be various other symptoms, *e. g.*, vomiting, diarrhea, retention or suppression of urine, associated with the collapse, but they are all cases of this type; that is, they are all sharp attacks coming on immediately or very shortly after instrumentation, and the fatal result occurs rarely later than forty-eight hours from the beginning of the attack. There may be little or no fever, and the attack begins so soon after its cause that there has been no time for any septic absorption to have taken place.

Again, in those cases in which there has been suppression of urine, death takes place so quickly that it cannot by any possibility be attributed to uremia following the suppression. These are cases of shock, pure and simple.

II. *Cases of Acute Fever.*—We come next to a class of cases having little or nothing to do with the class already spoken of, and yet concerning the nature of which the greatest differences of opinion exist. I mean the acute febrile cases—the commonest form of urinary fever, and the type of case that we see most frequently and often speak of as a case of "catheter fever."

That these cases may have certain symptoms in common with the class of cases already mentioned is certainly true, and it is apparently for this reason that some writers have called them cases of shock; others, cases due to uremia; while still others mention malaria as the causative element. A typical case of this class would be the following:

A patient in good general condition is examined for stricture, and a bougie or steel sound passed with little or no difficulty. After several hours, and generally shortly after the first urination following the passage of the instrument, the patient experiences a distinct chill. He looks ill, has an anxious expression, and begins to complain of pains in back and head. The temperature rises, and there may be vomiting and retention of urine. The temperature goes higher, and thirst becomes marked. This febrile attack lasts a few hours, and gives way to a period of sweating, after which the patient is left in an exhausted condition. As a rule the fever subsides within twenty-four hours, and on the next day he has well-nigh recovered his ordinary health. This usually ends the trouble, but the attack may be repeated once or oftener without fresh provocation of any sort. This recurrence, with no further instrumentation or other assignable cause, would, of course, suggest further trouble of a serious nature, but attacks of this sort may go on for some weeks, with many recurrences, and yet end in recovery. Sir Henry Thompson, in speaking of these recurrences, says: "And sometimes the reason for the

recurrence is not very obvious; thus, if no cystitis appears, or if a preëxisting slight attack is not intensified, suspicion may arise as to the presence of inflammation in the ureter or pelvis of the kidney of either side, to be sought for by examination for local tenderness, etc. And when there is no such affection, and no renal implication or other cause—septicemic infection for example—discoverable, the recurring attacks will probably soon diminish and disappear." Can such an acute febrile attack be caused by nervous shock? If so, the attack should follow immediately upon its cause, and should be the greater in proportion as its cause is the more severe and prolonged. This is not the case, for the fever does not occur until several hours after the instrumentation, and more commonly a short time (from one to four hours) after the first micturition following the use of the instrument. It is also quite apt to follow a simple, easily performed catheterization. Then, too, if due to shock, we should not expect any prophylactic after-treatment to prevent the attacks after urethral operations. Yet it would seem that nearly all the cases escape with no disturbance whatever, when, after internal urethrotomy, for example, steps are taken to prevent contact of urine with the wound. It is also well known to surgeons that these attacks are comparatively rare after an external perineal urethrotomy or lithotomy when proper bladder-drainage is secured. It is also found that the position of the wound in operations upon the urethra has a direct influence upon the appearance of these symptoms.

Mr. Reginald Harrison says: "We find such symptoms more frequently follow when the wound is made on the floor of the urethra in preference to the roof. A dependent position of the wound is more likely to be associated with the fever than one not so situated."

Mr. Harrison adopted the theory that these febrile attacks after urethral operations were due to poisonous material of some sort furnished by the urine, and absorbed through the wound made by the operation. He performed a number of operations with the idea of keeping the urethral wound entirely free from contact with urine, either fresh or decomposed. To accomplish this end he performed an internal urethrotomy on each one of a series of cases of anterior stricture, and then secured absolute and perfect drainage in each case by also performing an external perineal urethrotomy. In this way the urethral wounds were kept free from all contact with urine, and in no such case was there any sign of urinary fever, while in the internal urethrotomies that he had previously performed rigors and febrile symptoms were of common occurrence.

Other observers do not agree with Mr. Harrison on this point. Dr. F. S. Watson, of Boston, has recently performed a series of such operations, *i. e.*, combined internal and external (perineal) urethrotomy; and in two of the cases with perfect bladder-drainage and with every care given to surgical cleanliness there were attacks of urinary fever. Mr. Harrison, then, is a supporter of the absorption theory of the causation of this fever, and in his articles on the subject tries to answer the two main arguments that are brought forward against this view.

In the first place it is asked: "If this fever is septic, why do we not have it in very severe form in cases of urinary extravasation?" His reply to this is, that when urine is extravasated it acts as a local poison, killing the surrounding tissues, so that little if any absorption takes place.

Again it is asked: "If this fever is septic, how are the rapidly fatal cases to be explained—that is, the cases that die in from twenty-four to forty-eight hours, with no lesion of continuity in urethra or bladder discoverable at the autopsy?" To begin with, such a lesion may readily exist, and be an ample channel for absorption, and yet not be readily found at an autopsy; and beside this, the cases referred to are not cases of urethral or urinary fever at all, but are admirable examples of the severer form of shock already spoken of at some length.

Now comes the question: "If this fever is due to the absorption of certain poisonous products, what are these products? In a series of articles that appeared in the French medical journals between 1882–86, Dr. Bouchard reports the results of an interesting series of investigations in this direction. Bouchard found that in the healthy person there exist certain alkaloids that are formed in the intestinal tract as a result of the activity of putrefactive organisms; that these alkaloids are excreted in part by the kidneys, and so are to be found in normal urine; and that the diseases that augment the production of these intestinal alkaloids must also augment their presence in the urine. Then he found that urine injected subcutaneously produced certain effects upon rabbits, and that these effects varied accordingly as the person furnishing the urine was healthy or not. Next he proved that the symptoms produced were not due to any of the ordinary chemical constituents of the urine, and inferred that the alkaloids mentioned were therefore the causative agents. At all events, whether the poison absorbed consists of bacteria themselves or of the results of bacterial activity, these investigations are extremely valuable, if only as a suggestion of how much there remains for the medical chemistry of the future to make clear to us.

III. *Cases of Chronic Fever.*—We now reach a third class of disturbances following urethral instrumentation. These are the *chronic* febrile cases, which

form a very distinct class by themselves. In them the attack follows the passage of a catheter for the relief of a more or less distended and atonied bladder. An old stricture or a gradually progressive prostatic hypertrophy has caused a long-standing obstruction to urinary outflow; the result has been the retention in the bladder of a slowly but constantly increasing quantity of urine—so-called "residual urine"—and a consequent long-continued distention and slowly increasing atony of that organ. Such a case comes sooner or later to the surgeon for relief, the patient complaining that he cannot hold his water; that it is constantly dribbling away from him.

Inquiry reveals the fact that the trouble has existed and has been increasing for several years, and the catheter draws off a considerable quantity of residual urine. The patient is instructed as to his condition, and is regularly started on his catheter-life. In a few days he begins to feel poorly, has chilly feelings, but not necessarily a distinct rigor. He becomes feverish, but his fever is slight and has distinct intermissions. He loses his appetite, suffers considerably from thirst, and feels wretched at all times; his tongue becomes dry, and covered with a brown coating. Examination of the urine generally shows a cystitis more or less marked, even if this condition did not exist before the beginning of regular catheterism. This condition may persist for weeks, and yet, with proper care, the patient recover, or it may terminate fatally, in which case there will almost invariably be found advanced disease of ureters and kidneys.

If the obstruction has been of long duration before relief was sought, there is usually a more or less marked atony of the bladder-wall and a urine of very low specific gravity, the latter suggesting the probable existence of dilated ureters with hydro-nephrosis or pyo-nephrosis. These are the cases that terminate fatally. If, on the other hand, relief was sought early, the febrile disturbance will probably disappear gradually, and the patient may continue his catheter-life in comfort for years. Sir Henry Thompson says that when catheter treatment is begun so early that the quantity of residual urine in the bladder does not exceed ℥xii-xv, a favorable prognosis may generally be given. It has been asserted, notably by Sir Andrew Clark, in an article published in the London *Lancet* for December 22, 1883, that this form of fever may exist and prove fatal, with no such serious disease of the kidney discoverable at the autopsy. If this is true, it must occur rarely, since it is certain that in most of the cases such disease exists. He mentions two cases that died of this form of fever. In one there was no autopsy, and in the other the report is as follows: "The prostate was enlarged, the bladder was dilated and thickened—viewed from the inside it was trabecular and slightly saccular—the mucous lining congested and in part *eroded*, and everywhere coated with a grayish-white, stinking mucus. There was nothing to be detected in the ureters or kidneys, although they were carefully examined. With such a vesical condition as this, is it not possible that the fatal issue was due to a septicemia that had its starting-point in the bladder? What is the cause of such an outbreak of fever? Mr. Henry Morris explains it as follows. He says: "It is to the state of the kidney prior to surgical treatment, and not to the state of the bladder after the commencement of catheterism, that we ought to look for an explanation of this form of fever." In other words, this so-called "surgical kidney" is not necessarily the result of an extension upward of a septic inflammation from below, but the disease already existing in the kidney is the starting-point of the trouble that follows catheterization. He says that two conditions are essential to bring about the disturbance:

First. A preëxisting degeneration of the secreting substance of the kidney.

Second. An alteration in the intra-renal pressure as a result of obstruction, whereby the ureters, pelves and calices of the kidneys become dilated.

When under these conditions a catheter is passed, a state of active congestion is initiated in the kidneys by the release of this pressure. This increased blood-supply to the kidneys cannot be controlled by the natural elasticity of these organs and their capsules, because the preëxisting chronic changes in these organs have led to a firm adhesion of the overstretched capsules; and the elasticity of the renal substance has been destroyed by the intra-renal pressure of the long-pent-up urine; so that in the condition of active congestion the kidney-substance is between two firm pressures, and the result is an acute pyelo-nephritis, in addition to the chronic interstitial changes that already existed in the kidneys. So far as I am aware, no explanation has been offered for the fatal results that are said to occasionally take place without the existence of renal disease to account for them.

IV. *Cases of Direct Septic Infection.*—Before speaking of the treatment of these various forms of disturbance, it seems proper to mention the trouble that may arise as a result of direct septic infection following instrumentation upon urethra or bladder.

Of this but little need be said. As the result of the passage of an unclean instrument we may get a simple cystitis, accompanied by slight, if any, constitutional disturbance. This may, and generally does, clear up and disappear under proper treatment; or, the septic process may extend up the ureter and cause a pyelo-nephritis and death from the so-called surgical kidney.

Again, we may have absorption of the septic

material through a wound made by the instrument, and so a true septicemia may begin. This may prove slight and end in recovery, or may speedily prove fatal. Finally, as a result of purulent absorption we may have the rare complication of pyemia with pus-formation in joints, pleuræ, etc. This proves fatal in the majority of cases.

We have spoken of four classes of disturbance following instrumentation on the male bladder and urethra, and in these four classes can, I believe, be arranged all cases of disturbance of this sort. These were:

First: The cases of "urethral shock" brought about by the simple passage of an instrument in the urethra; very common, and, as a rule, of little importance, but occasionally terminating in speedy death. This fatal form is rare, and generally associated with renal disease of some sort.

Second: The cases of "acute urinary fever," probably caused by absorption of poisonous products from the urine; these acute attacks at times recur without any known cause, such as further instrumentation.

Third: The cases of "chronic urinary fever," coming on after catheterism in cases in which for a long time obstructive disease in some form had pre-existed.

Fourth: Cases of "septic infection" from an unclean instrument. This may be merely a mild cystitis, may extend upward and cause septic trouble in the kidney, or may manifest itself as a true general septicemia or pyemia.

It is certainly unwise to use any one term—be it "catheter fever" or some other—to include these different sets of cases. The cases of nervous disturbance, the "shock" cases, differ in no respect from cases of nervous shock produced in other ways. The same may be said of the septic cases. This leaves us two sets of cases to which the term "urinary fever" may properly be applied: the acute cases, and the chronic cases occurring in patients with obstructive disease. To these two classes the terms "acute urinary fever" and "chronic urinary fever" may be properly applied.

Treatment.—Of the treatment of acute urinary fever there is little to say. Quinine, of which much has been written, is of no value in preventing the attacks. This, however, cannot be said of aconite; which in two-minim doses of Fleming's tincture, as recommended by Mr. Long, seems often to be of value as a prophylactic. Frequent, small doses of digitalis are of value in cases associated with suppression of urine. Dr. Keyes, in speaking of prophylaxis, says: "I do not know of any remedy that can in all cases avert chill, but I place more reliance upon a combination of pilocarpine and morphine than on anything else."

The importance of surgical cleanliness and proper drainage of urine in the treatment of urethral and bladder cases cannot be over-estimated. All instruments should be surgically clean, and in cases of urethral operations, when it is not deemed best entirely to prevent contact of urine with the wound, either by tying in a catheter or by doing a perineal section, the urethra should be cleansed by frequent careful irrigations.

That by proper care the development of chronic cases can always be prevented is, of course, not true, but it is true that the frequency of their occurrence can be controlled by careful attention to the details of catheterism.

Having decided to start our patient on his catheter-life, how are we to proceed? The patient should rest quietly indoors, upon a light diet (chiefly milk) for two or three days before the first catheterization, and for the first week or so of regular catheterism. The catheter should be passed regularly, as often as may be found necessary in the individual case, and with the instrument that is found best adapted to that case (generally a Condé instrument of moderate size). The bladder should never be completely emptied, and this is of greater importance the longer the obstruction to natural urination has existed and the greater the quantity of residual urine and atony of the bladder-wall that results. A good method to pursue is to slowly draw off a moderate quantity of urine, and then to replace this by a smaller quantity of some mild antiseptic solution, such as boric acid, permanganate of potash, or corrosive sublimate. In this way the bladder can, in the course of a few days, be carefully and gradually emptied without any sudden diminution in the pressure of the pent-up urine that has so long been present.

There should be no unnecessary manipulations in the early days of the catheterism, and irrigations of the bladder for the cure of a purulent cystitis should be deferred until the patient's bladder has become accustomed to its new condition. Finally, after he has become a little familiar with the procedure, the patient may be instructed to catheterize himself. If, in cases of this sort, some such plan were carefully carried out, we would have fewer and milder cases of chronic urinary fever.

BIBLIOGRAPHY.

Velpeau: Leçons orales de Chir. clin., etc., 1841, p. 326. *Long:* Liverpool Med.-Chir. Journal, January, 1858. *Simpson:* Edinburgh Med. Times and Gazette, April 23, 1859. *Marx:* Sydenham Society's Year-book (review), 1863. *Fayrer:* Medical Times and Gazette, August 15, 1868. *Banks:* Edinburgh Medical Journal, 1871, p. 1074. *Malherbe:* De la Fièvre dans les Malades des Voies urinaires, Paris, 1872. *Gouley:* Diseases of the Urinary Organs, 1873. *Girard:* Résorption urineuse et Urémie dans les Malades des Voies urinaires, Paris,

1873. *Dickinson:* London Lancet, March 8, 1873. *Gosselin and Robin:* L'Urine ammoniacal et la Fièvre urineuse, Paris, 1874. *Englisch:* Wiener med. Presse, ix., 1874. *Paget:* Clin. Lectures and Essays, 1875, p. 155. *Morris:* London Lancet, 1883, p. 1080. *Sir Andrew Clark:* London Lancet, 1883, pp. 1075–1085. *Bouchard:* Revue de Méd., Paris, 1882, ii. p. 825; Comptes Rendus, December 6, 1884; Gazette Hebdomadaire, May 19, 1886. *Harrison:* Edinburgh Medical Journal, 1886, p. 251; Surgical Disorders of the Urinary Organs, 1887, Lect. VI. *Sir H. Thompson:* Disorders of the Urinary Organs, 1888, Lects. XI. and XV.

SOME SUGGESTIONS AS TO THE NATURE AND CAUSATION OF ECZEMA.

BY WOODS HUTCHINSON, M.D.,
OF DES MOINES, IOWA.

IT would be a well-nigh hopeless endeavor to attempt to say anything fresh about eczema, since one might about as well attempt originality in discussing the contents of Scarpa's triangle, or to add another zygapophysis to the dorsal vertebræ. Gallons of ink have been spread upon acres of paper in the description of its chamelion-like variations, and the discussion of its relation to age, sex, diet, clothing, and the stages of the moon, would fill volumes. The list of substances recommended in its treatment is almost co-extensive with the pharmacopœia; in fact, the drug that is not suspected of being useful in this connection is apparently yet to be discovered. The very voluminousness of its literature, however, is proof both of the interest of the subject and the delightful uncertainty that surrounds some of its important relations; it may even serve as an excuse for presenting the following brief suggestions:

Rating it by the frequency of its occurrence, eczema certainly is entitled to a considerable share of the literature of disease, for it has probably one of the widest known ranges, both racial, personal, and geographic, of all pathological processes, attacking old and young, rich and poor, vigorous and feeble, with an impartiality that is positively refreshing by comparison with the strong tendency displayed by most other diseases to hit a man only when he is down. Jamieson estimates that it makes up or enters into one-half of all skin affections, while such is its infinite variability that Bulkley has found no less than one hundred and fifty different Latin terms applied to describe its changing moods. A disease of marked individuality, and yet having no single symptom that is absolutely diagnostic, and no microscopic appearance that can be called characteristic, it occupies in nosology a unique position. It is not my purpose to discuss this interesting process as a whole, but merely to submit for discussion two conclusions in regard to its nature and causation, with reasons that seem to me to support them.

These are, first, that eczema is merely the simplest, most rudimentary form of chronic inflammation of which the cutaneous tissues are capable, their easiest mode of expressing resentment at outside interference, the "retort direct," or "you're another," of their never-ceasing dispute with their environment. In other words, that the uniformity of the disease-process in different subjects is due to the similarity in structure and reactions of the tissues wherein it occurs.

Second, that the variations of the process are due principally to the infinite variety of causes that may excite it, and that in the great majority of cases are influences external to the body. Of course, I am aware that part of these conclusions would be accepted by nearly all dermatologists, part vigorously disputed, and part generally rejected, and that there is little new or original about them except their form, so that, to save time, I shall dispense with the quotation of authorities, and proceed to submit the considerations that seem to justify them, leaving the reader to decide upon their validity. First, and most important of all, is the fact that the pathological changes of eczema, whether microscopic or clinical, are in no essential respect different from those of a simple inflammation (dermatitis), except in the time required for their production and the modifications incident upon their more gradual development. An eczema differs from a burn in the same way that the decay of a prostrate monarch of the forest in its native glade differs from the blazing and crackling of a log upon the hearth. It is the time-relations that differ, the processes and their products being otherwise identical. A sunburn or scald reaches at one bound the erythematous or vesicular condition for the attainment of which in an eczematous fashion the repeated application of less active irritants for days or weeks would be necessary—except, of course, that the more rapid process produces less stable results, and the sudden change of tension in the nerve fibrils gives us pain in the place of itching. The stages and forms of eczema depend principally upon the degree or length of persistence of the irritation. Should the irritant be a feeble one, or but recently applied, we find only a general hyperemia and swelling of the epidermal tissues, with a sensation of heat or slight itchiness—the erythematous stage or form. Let the irritation be a little more vigorous or prolonged, and minute disseminated foci of exudation spring up all over the rete mucosum, and the papular stage is developed; another turn of the screw and each papule becomes rapidly swollen with serum, and bulging in the direction of least resistance, pushes up the epidermis, and forms a vesicle (eczema vesiculosum) that possibly ruptures (eczema madidans). Let the pressure rise a little higher, or the resisting power of the tissues be diminished, and there ensues rapid death of the cellular elements in the vesicles, the

pustular form, with its resulting crusts. At any stage of the game, on the withdrawal of the exciting cause, the hyperemia may disappear, the papules may shrink up, the vesicles dry down into scales, or the pustules into crusts, and a new term is needed —"squamosa" or "sicca." On the other hand, should the disturbing influence persist so as to keep the skin in a state of continual ebullition, the whole thickness of the corium becomes involved and thickened, nutrition of the superficial layers is interfered with, cracks form, the epiderm becomes horny or discolored, and "eczema chronica" is in possession of the field.

The second basis of my conclusion is, that a genuine and characteristic eczema can be produced upon perfectly healthy skins solely by the application of external irritants—in fact, a large and influential body of authorities declare that all eczemas are so caused. A familiar instance is the eruption following the exposure to "poison ivy," an eczema of the eczemas, with every characteristic symptom in perfection. It is hardly necessary for me to refer to the whole classes of "intertrigos," occupation-eczemas and clothing-eczemas, as further illustrations. The third consideration of interest in this connection is the fact that eczema is not limited to the human skin, but that the epidermis of all the domestic animals and of some plants is capable of an identical or analogous reaction. It would, indeed, seem to be one of the common inheritances of all living surface tissue. Its earliest analogue is, probably, the exudation of gummy or resinous fluids upon the stems or leaves of certain plants and trees, for the healing of wounds as a protection against fungi, or for the entanglement of insect enemies, and, in this connection, I can hardly resist placing the remarkable pouring or flowing out of the protoplasm from the surface of an amœba, by which it surrounds and encloses foreign bodies, and, if available, digests them. If these analogies be admitted, they would give to eczema a rational standing-ground as a reversion to a mode of action that was normal and useful to our remote ancestors—a relation that I believe, in the near future, will be traced in most of our distinctive disease processes; it seems, in fact, almost safe to assume it already in gout, cancer, and tubercle. Higher up in the plant scale we find a disease (the details of which, together with other interesting information, have been most kindly furnished me by Professor Pammel, of the State Agricultural College) that I am almost tempted to claim as a vegetable eczema, in "apple scab," caused by a fungus, *fusicladium dendriticum*. The presence of this parasite upon the bark provokes an exudation of cellular material from the cambium layer ("papular stage") that goes on to the formation of a layer or patches of cork ("horny stage"), and thus the softer tissues are protected from its ravages. In potato scab we have another similar process. Another fungus, *ozonium aunieconum*, produces a knotty eruption on the roots of the cotton-plant.

In domestic animals the eczemas are quite common, although perhaps not so frequent as upon the bare skins of the genus humanum. "Mange" in dogs, "grease" in horses, and "foot-and-mouth-disease" in cattle, are among the most familiar forms of its occurrence. I am informed by my friend Dr. A. B. Morse, D.V.S., that the morbid process is practically identical with that in the human subject, except that the pustular stage is more commonly and readily developed (as of course is the case in the hair-covered portions of the human epidermis), and that the best modern authorities regard almost every form of it as due to some germ or parasite—in other words, to almost the only chronic irritant from which the animal skin is not protected. Partial exceptions to this rule are the vesicular eruptions that often constitute the first stage of "collar-galls," or "saddle-galls," in horses, and that appear on the ears of dogs when chained up during summer-time. These are friction eczemas, due in one case to the pressure of the harness, and in the other to the combined influence of flies and scratching.

The fourth consideration bearing upon the inflammatory nature of eczema is the number of other diseases in which it constitutes the bulk of the morbid process. Scabies is but an eczema produced by the presence of the acarus or the sulphur applied to kill it, plus the actual burrows of the insect and scratch-marks. Pediculosis or phthiriasis is constructed on the same plan, and the seborrheas are probably at bottom eczemas. I think we would be justified in declaring that the pathological changes in the great group of trichophytoses or ringworms are eczematous, as the term "eczema marginatum" so generally applied to tinea cruris implies. In fact, the easiest form of dermic revolt against the tyranny of any parasite would seem to be an eczema.

Another straw pointing in this direction is the marked extent to which eczema prevails during infancy and childhood, when the poor little pink epiderm is struggling to adjust itself to the trying change from the nicely warmed water-bath in which it has been floating, to the flannels, soaps and changes of temperature and moisture of an unfriendly world. The innumerable caravan of "red gums," "prickly heats," "teething rashes," "heat rashes," "lichen scrofulosorum," etc., are all of this nature, and Bulkley, in his paper before the Berlin International Congress, gives tables showing that nearly 20 per cent. of all cases of eczema occur during the first five years of life, which is probably decidedly under the actual mark, so many cases at

this age being too slight to be considered worth treating.

If eczema be simply a dermatitis we can readily understand its well-marked preference for flexor surfaces, and especially flexures, as not only is the skin in these situations thinner, more delicate, and hence more easily injured, but, from the formation of the parts, perspiration, dust and foreign matter are much more apt to accumulate there, to say nothing of the mutual heat, friction or pressure of the opposing surfaces.

The so-called internal or predisposing causes of eczema seem, so far as our knowledge of this somewhat mysterious subject goes, to fall into line with the hypothesis. I think they can nearly all be divided into two main classes—those diseases or diatheses that throw too much vicarious excretory work upon the skin, or fill its vast mesh of bloodvessels with blood loaded with irritating nitrogenous substances—such as rheumatism, lithemia, diabetes and disturbances of the metabolic functions generally; and those states or influences that depress the resisting power of the skin and all the tissues of the body—such as exhausting disease, chlorosis, lactation, over-work or over-confinement, thus rendering it more vulnerable to external attacks. The first class, and it is by far the larger, is apparently simple, a case of response to local irritation from within instead of from without, although the addition of the latter is probably necessary to provoke an actual outbreak. Roughly speaking, the second class would seem to obey the general law that all morbid action may be initiated either by increasing the external pressure of the environment, or by diminishing the internal resistance of the organism. Of course, this explanatory suggestion is very crude, and only applies to very few of the difficulties of this vast and misty field, but so far as it goes it seems not wholly irrelevant.

If the probability of my first general conclusion is admitted, that of my second, that the variations of the disease are due to the variations of the cause, is practically implied, for if the essential morbid process be a simple primitive inflammatory change, it will then be modified according to locality, intensity and duration, all of which are determined by the nature of the influence that produces and perpetuates it. The chief value of this principle is as a basis of classification, and it seems to me that if on these lines we can succeed, ever so loosely, in dividing the mighty hosts of eczema, the classification will at least have the merits of simplicity, clearness, naturalness and practical working value. The mere location of a given case carries with it its prognosis and indications for treatment. With your permission I will submit a rough outline of such a classification, with a few illustrative cases. By far the most important is:

CLASS 1. Eczemas produced by influences entirely external to the body: divided into (a) climatic; (b) chemical; (c) mechanical or "frictional;" and (d) mycotic or parasitic.

CLASS 2. Eczemas produced by bodily influences or properties acting from without; examples, "intertrigo," eczema of the anus, the groin, or the back of the ear.

CLASS 3. Eczemas produced by bodily influences acting from within: (a) locally, as gout or rheumatism; (b) generally, as lactation, or anemia.

It must be admitted that not even these rough divisions are based upon absolutely hard and fast lines. Not only will Class 1 contain nearly 80 per cent. of all cases, but its method of causation will in some degree be present in nearly all those falling in the other two classes—indeed, it is hardly possible to conceive of an eczema occurring without some external provoking cause, although there are many cases wherein it is so palpably merely the last straw, the feather's touch, that precipitates the explosion, that we are justified in ascribing them to the preëxisting and predisposing conditions of the tissues. On the other hand, there are cases to which the classification will hardly apply, since the most careful investigation will fail to discover any cause whatever for them. It is a significant fact, however, that idiopathic eczema is becoming an extinct species almost as rapidly as is functional disease of the nervous tissues.

I will now briefly present a few typical cases that will illustrate my general drift better than pages of explanation. As an example of the first division of Class 1, climatic eczema, we have:

CASE I.—A gentleman of about forty-six years of age, who ten years previously had emigrated to Iowa from the North of England. Within a few months after his arrival he began to be annoyed by acute attacks of vesicular eczema, starting upon the lower eyelids and spreading to the cheeks, eyebrows, and even to the folds of the neck and jaw; it also occasionally appeared between the fingers and on the backs of the hands. These attacks nearly always appeared to follow some unusual exposure to sun or wind, and would last from three to six days, and from the itching, burning and swelling of the parts caused great discomfort. He was in perfect health, and had never suffered from any similar affection in England. No treatment seemed to have any appreciable effect except the use of tar-water, which, freely applied, promptly relieved the itching, and caused the eruption to subside in a few days, only, however, to reappear on the next exposure. After three years' residence here he returned to England for a short visit, when, to his great relief, the trouble left him at once, and did not reappear until after his return to Iowa. From

this time the affection seemed gradually to subside, and in two or three years almost ceased to trouble him, reappearing only in a mild form after any unusual exposure to sun or wind.

CASE II.—A healthy young girl, about eighteen years of age, complained of an eruption that appeared upon the backs of her hands and wrists whenever they were especially exposed to the sun or wind, as in boating or fishing. The eruption annoyed her greatly by the itching and burning that accompanied it, although lasting only a few hours after the cessation of the exposure. It consisted of a large number of scattered papules, elevated and of bright-red color, that gave the whole skin a distinctly roughened and shotty feeling to the touch.

CASE III.—A college student, about twenty years of age, called my attention to an irritable condition of the skin of his nose that had appeared, he stated, since he left his home in Florida three weeks before. On examination I discovered upon the sides of the nose and cheeks a small "butterfly patch," of minutely vesicular, elevated scaly eruption, which itched and burned slightly. On questioning him he recollected that he had been similarly troubled on visiting in the North on two previous occasions. He had never thought of a climatic origin. I simply advised a little care as to soap, washing, etc., and in the course of a few months the eruption ceased to annoy him, and has now almost entirely disappeared.

Cases of eczema due to chemical causes, or "poisonings" of various kinds, are so common and so well understood that the division needs no illustration. For the same reason, in this brief sketch, a single case under the third or mechanical division must suffice:

CASE IV.—A healthy young merchant, of about twenty-five years of age, replying to the usual question in an examination for life-insurance, said he had no "eruption on the skin," except a "spot" on his right leg. On inspection I found this to be a small, elevated, roughened patch of scaly eczema, about the size of a nickel, just over the shin-bone, about three inches below the knee. He said it had been there some months, and occasionally itched. I was quite at a loss to account for its singular position and shape until I found that it was exactly at the spot where the clasp of a somewhat elaborate hose-suspender rested upon the skin. There was no similar eruption upon any other part of the body, and the surrounding skin was perfectly healthy.

Under the mycotic division I have to report:

CASE V.—A boy, of about nineteen years of age, complained of "spots on his skin." The whole surface of his body was dotted over with round or oval patches of elevated scaly eruptions, of a yellowish color, varying from one-half inch to one inch in diameter. He stated that these had appeared about one month before upon his chest, and gradually spread. Only the covered parts of his skin were affected. There was little or no itching. His general health was excellent. The eruption rapidly and completely disappeared under the use of a 2 per cent. resorcin ointment.

CASE IV.—A young mechanic, of vigorous physique, came to be relieved of a severe "chafing and scalding in the crotch," as he termed it. An inspection disclosed a patch of eruption, roughened, elevated, scaly, and of a deep, almost coppery-red color, with well-defined margins, occupying the perineum and extending down the back of the scrotum and inside of the thighs. The condition had existed several weeks, and defied home treatment, the itching and burning now being extremely severe. Although half dreading to apply any stimulating application to such an intensely irritated surface, I gave him a 2 per cent. resorcin salve, with a simple dusting-powder of oleate of zinc and starch. The irritation subsided at once, and the eruption soon followed suit.

The mere mention of Class 2, the eczemas of the flexures, such as the anus, the groin, or back of the ears, is sufficient to call up a host of cases in one's own recollection, and the same is true of the first division of Class 3, the eczemas of gouty, rheumatic or diabetic subjects. I thus reach my last division, those eczemas due to the effect of general depression:

CASE VII.—H. C., a conductor, aged thirty-nine, as the result of a collision sustained a severe compound fracture of the bones of the left leg, with extensive lacerations. After a prolonged effort to save the limb, suppuration set in, and it became necessary to amputate above the knee. His general condition having become greatly depressed, the wound healed extremely slowly, a distinct anemic heart-murmur developed, puffing occurred under the eyes, and the stump became edematous and waxy-looking, easily pitting on pressure. Just as this depression was beginning to disappear a well-marked eczematous eruption appeared upon the upper and inner part of the swollen stump, well above the wound, and out of reach of the discharges. Under the use of zinc dusting-powders the itch was relieved, and the eruption scaled off and subsided, to reappear at intervals, each time in a milder form, until his general health was practically restored.

In another of my cases an eczema broke out upon the surface of an extensive scar consequent upon severe laceration and crushing of the parts, and ran a most obstinate course.

As an illustration of over-work as a contributory cause I may mention the case of a journalist now under my care, who assures me that loss of sleep or over-strain of any sort always promptly aggravates an eczema from which at intervals he has suffered slightly for some years past.

Dr. George Dock, formerly of Philadelphia, and for three years Professor of Pathology in the Texas Medical College, at Galveston, has been elected Professor of the Practice of Medicine in the University of Michigan, at Ann Arbor.

CLINICAL MEMORANDA.

SHORT NOTES ON RECENT SURGICAL CASES.[1]

BY ROBERT W. JOHNSON, M.D.,
OF BALTIMORE, MD.

I WISH to present the following cases, selected from my case-book of the past year:

NEPHROTOMY.

CASE I.—M. J., thirty-one years of age, white male, married, the father of six children, when seventeen years of age had gonorrhea without complications. Six years ago he had intermitting pain in the left side. He also had attacks of gnawing pain in the left renal region lasting from thirty-six hours to a week, accompanied by fever and slight chill. The pain extended into the left testicle, which swelled and was hot; his urine was high-colored. Two months ago he passed blood with his urine but had no pain at the time. Nausea accompanied the pain; the bowels were regular; there was no cough.

On April 14, 1890, the urine was muddy-looking, frothy and the specific gravity was 1025; the usual urinary odor was faint. It was slightly acid in reaction; boiling did not affect the transparency; the nitric acid test showed a superabundance of urates. Microscopically I found disintegrating and enlarged blood corpuscles, pus, and a soapy reaction with liquor potassæ; no crystals were apparent. There were marked pain and tenderness over the left loin and extending along the course of the ureter to the testicle. My diagnosis was pus in the pelvis of the left kidney, possibly due to an impacted calculus. Dr. Tiffany saw the patient with me. Finding fluctuation and swelling deep in the left groin, he concurred in the diagnosis and in the proposed treatment by operation.

On April 18th, the patient had for four days been suffering with pain, lassitude, and rise of temperature in the evening. With full aseptic precautions I cut through the left groin, one-fourth of an inch below and parallel to the last rib (previously counted), making an incision four inches long and two and a half inches from the spine. Dividing some fibres of the erector spinæ, and with my fingers separating the peri-renal fat, I came down on the sac of the abscess, which was the expanded pelvis of the kidney; I ruptured it with my finger, giving exit to about a quart and a half of thin pus. I washed out the cavity with 1 : 8000 bichloride solution followed by hot water. I found no calculus, the calices seeming soft and the kidney apparently not disorganized or containing any hard point. I sounded the ureter with a probe, but no impacted calculus was to be found. After introducing a large rubber drainage-tube I stuffed the abscess cavity with iodoform gauze. The external wound up to the drain opening was sewed with silk. The patient suffered from shock, but whiskey, hypodermatically, brought him up. The patient made an uninterrupted recovery, his temperature rising once to 101°, from blocking of the drain, which caused a recurrence of the old pain. At present he is able to attend to his work, walking three or four miles a day, and has general good health, although much annoyed by the urinary fistula that remains. The ureter is impervious on that side. He cannot tolerate the gathering of the urine, and after having tried numerous other devices he finds an absorbent cotton pad the most convenient receptacle. He knows that extirpation of the kidney is the only means of relief from this condition; but knowing his surroundings, with a family dependent upon him, I have advised him not to risk it. Fortunately for him no one would imagine he had a urinary fistula, as he is very neat and his urine is not ammoniacal. The local treatment consists in washing out the abscess cavity alternately with bichloride solution, carbolic acid, and permanganate of potash, so that the large surface may not absorb any one drug to his detriment. The capacity of the cavity is now about two ounces. I injected Armenian bole to see if I could find any in the urine from his bladder, but apparently there is no communication between the left kidney and his bladder. His testicles swell occasionally and he has mutterings of pain in his right side, but nothing to warrant the inference that his other ureter is involved.

LITHOTOMY.

CASE II.—A. N., thirteen years of age, white, came to America from Bohemia in 1890. He was employed as a tailor and led a sedentary life. He was admitted to St. Joseph's Hospital. He had a collateral tuberculous history on the part of his brother and sister. While on shipboard he had frequent micturition, pain and some blood in his urine. His urine was alkaline, with a specific gravity of 1010 and with pus and blood present. No stone was found, but apparent urethral incrustation near the neck of the bladder. The pain increased until it was almost unbearable, and in spite of sedative and antiseptic injections, including boracic acid, peroxide of hydrogen, a marked degree of cystitis remained, the pain being somewhat relieved by the retention of a soft catheter in the bladder. Further examination of the urinary deposit revealed no tubercle bacilli. The pain continuing, he was examined under chloroform. A stone, encysted or adherent to the right anterior wall of the bladder, was detected, and two days later, after cleansing the bladder with boracic acid solution, with Smith's small-sized lithotomy instrument, I did a left lateral lithotomy. There was but little hemorrhage, easily checked by a plug of iodoform gauze that was removed on the same evening. A stone was removed weighing 201 grains, about the size of a walnut, with phosphatic covering and presenting a corrugated indentation where it had been attached to the bladder. The child expressed great relief at once. His temperature kept about normal until the end of the second week, when the urine ceasing to flow through the wound, but now coming *per urethram*, there was a temporary rise to 102° with some tenderness over the bladder and a re-appearance of cystic urine. Benzoic acid with biborate of soda reduced the temperature at once, with the subsidence of the bladder irritation, and his progress to recovery was not marked by any relapse.

I would call attention to three points in connection with this case: First, the fact that so large a stone was not diagnosticated at the first examination. This I attributed to the fact that it was securely held by its attachment to the anterior wall of the bladder, a rather

[1] Read before the Clinical Society of Maryland, May 15, 1891.

unusual location for stone in children. Again, the phosphatic roughness of the urethra presented an apparent cause for his pain, frequent micturition, etc. Second, the great value of the Smith's lithotomy instrument, which renders the operation so mechanical that it is difficult to go astray in its use. I know this has been urged as an objection to it, and it has been said that anyone can do lithotomy with it, without skill or *tactus eruditus*. The obstetric forceps is mechanical, the plaster splint is mechanical, the ligature is mechanical—the very name of surgery is suggestive of handicraft, and one should welcome any simple mechanism that renders our science as much service as the instrument indicated. The last point about this case is the way in which it illustrates the value of benzoic acid and biborate of soda:

℞.—Acid. benzoic. . . . . gr. xxx.
Sod. biborat. . . . . ʒss.
Aquæ . . . . . ʒiij.
M. et ft. sol. S.—ʒij t. d. in water.

I did not use this combination until after the operation, when the child's temperature went up as the wound-drainage ceased. It acts as a specific, and men who have had much larger experience in these cases than myself tell me that the only objection to its use is that after taking it the patient seems to forget he has a stone and does not return, or declines the operation.

The next case to which I ask your attention is interesting rather from the peculiarity of the injury than from its treatment.

UNUSUAL COMPRESSION.

CASE III.—J. N., aged thirty, an Irish laborer, six feet tall and well proportioned, was caught under a gradually descending weight of ten tons and was compressed against an iron floor three minutes, he states, in a space not over twelve inches deep. The weight descended against his left arm, forcing it in flexed position against his side. He was unconscious when relieved. Blood flowed from his nose, mouth and ears. When seen by me there was great congestion of the face; the eyes were dark-purple from effused blood in the conjunctivæ (the black eye of a prize-fighter); the pupils were normal and there was no paralysis of the tongue. There was great mental hebetude, but the man could be roused. The pulse was slow. Petechial spots of extravasation appeared on the shoulder and purpuric spots in the skin. There was no fracture of the ribs. He was treated by active catharsis with calomel and salts, and cold applications to the head. In eight days he was able to walk about the ward, falteringly at first, but gradually recovered entirely, though when discharged his eyes reminded me of the rear end of the caboose in a night freight-train, as they looked like two red lanterns set in his head. The point of interest is the fact that there was no apparent internal hemorrhage in any of the more vascular organs, but that the compression forced the blood into the skin and through the fragile vessels of the nose, conjunctivæ and ear, rather than into apoplectic foci in the lungs or brain. The latter was no doubt congested, as was indicated by his early mental hebetude and slow pulse.

The two cases I now report are good examples of the satisfactory result of healing under the blood-clot, a method dwelt on by Schede in 1886 and practically illustrated in the masterly results obtained by Prof. Halsted and reported in the Johns Hopkins Hospital Report on Surgery.

COMPOUND FRACTURE OF THE FEMUR.

CASE IV.—J. C., aged fifty-five years, fell eighteen feet, cutting the face and bruising the body, with impacted fracture of the left wrist, simple fracture of the tip of the radius and right wrist, compound fracture of the lower third of the right femur, with an external wound two inches in length. When I saw the case the temporary dressing of bichloride gauze, with which, if possible, all my wounds are temporarily dressed before the patient is forwarded to the hospital, was removed. The external wound was washed with a weak solution of bichloride, and after washing with soap and shaving, catgut stitches brought the margins of the wound together. Iodoform-gauze dressing was applied with pressure by lino bandage, and the leg placed in a long side-splint and pasteboard internal splint with twelve-pound extension. No drainage was provided for. Healing followed *per primam* except at the seat of a small suture-abscess. A plaster splint was substituted in two weeks. The result was satisfactory. There was no infection at the seat of the compound fracture. Contrasting the temperature charts of this case and of another of simple fracture of the femur brought in at about the same time showed that there was greater variation from the normal in the simple than in the compound fracture. In both the variation was very slight.

BURN BY MOLTEN IRON.

CASE V.—E. C., aged thirty years, a colored laborer, accidentally put his left foot and ankle into molten iron as it poured from a furnace, at the same time burning his right foot slightly. He was admitted to the hospital March 6, 1891, with the whole integument of the left foot and ankle, except a small island of skin over the instep, in a charred condition. As it was impossible at the time to say how much of the foot could be saved, it was enveloped in cotton batting and carron oil, and when suppuration began was washed twice a day with permanganate of potash solution. April 6th, one month after his admission, it was apparent that the whole foot could not be saved, as some of the toes were gangrenous and the tendons of the extensors were necrotic; there were still also small sloughs adherent to the foot. At this date the whole surface of the foot, sole and all the ankle, except the islet of skin and the necrotic toes, was granulating and suppurating extensively. I determined to perform an amputation mentioned by Agnew and if possible (though I hardly hoped for success) have the incision unite by first intention. Soaking his foot in 1:10,000 bichloride solution in a foot-tub for twenty minutes before operating and taking aseptic precautions about instruments, dressing, etc., I made a transverse incision over the instep along the edge of the island of skin, disarticulated three cuneiform and the cuboid bones, using Esmarch's bandage and making the plantar flap from the granulation-covered sole. Silk ligatures were used, some difficulty being encountered in securing the plantar arteries. The wound was not washed with any aseptic solution. Boiled water was used in cleansing the sites of the bleeding-points. No drainage was introduced, but the flaps, with their granulating and

edematous edges, were united loosely with silk ligatures. The wound filling with blood from the oozing, gutta-percha protective was applied, then iodoform gauze, then sterilized cotton and lino bandages tightly so as to get pressure that was graduated by the bulk of the cotton, and as there was marked shock the patient was stimulated. I determined not to change the dressing unless there was some constitutional evidence of trouble, as indicated by temperature or pulse. As it was, his pulse was quieter after the first two days than it had been previously to the operation; and except on the evening of the operation, when his temperature rose to 102° (a rise I attributed to reaction after the shock) it did not go over 100°, the greater part of the time remaining at 99°. The discharge from the granulating surface outside the wound, and some no doubt from the blood-clot itself, soon moistened the dressing and it became so offensive that in spite of my previous resolve not to tamper with it unless there was constitutional evidence of infection I removed it on the ninth day. I found evidences of pus over the granulating surfaces of the burn, which had become beautifully less under the non-irritating protective, and the wound apparently closed from end to end along the line of incision; nor could I detect any fluctuation in the wound indicating pus—in fact, so far it presented the same appearance, as far as union was concerned, as if there had been no infecting surfaces in the immediate neighborhood. I trickled bichloride solution 1:2000 over the superficial ulceration, reapplied protective, which acts so satisfactorily in preventing the rude annihilation of capillaries by the removal of the adherent dressing, reapplied gauze and sterilized cotton fortified by several turns of plaster-of-Paris bandage. The man continued to do well, complaining of no pain worth mentioning, his pulse and temperature remaining about normal. His appetite was good, he slept well, etc. On the twenty-first day from curiosity I removed the dressing. The incision was firmly united, with no trace of suppuration in the wound. The silk suture showed beneath the granulating surface, which is markedly decreasing, with the same glazed appearance, due to the protective, as was seen at the time of the last dressing. The wound is now well, though the granulating surfaces will continue to heal for some time; the general condition in every respect is good.

I am not able to say exactly what the meaning of this primary union in the presence of pus-infiltrated granulations is. The soaking of the foot in bichloride solution at best sterilized only superficially the outside of the ulceration. It is certain that the incision must have been infected with pus-organisms in large numbers, as I handled the foot and leg and flaps indifferently. The sutures and ligatures were aseptic, yet nothing but boiled water was used to wash the incision; still, in spite of this, the blood-clot (?), purposely left without drainage, had the antiseptic quality of preventing suppuration in the wound, and that too while the external incisions at least were contaminated by the pus in the granulations. The line of incision is not visible except for the sutures purposely left for inspection.

Whether this immunity from suppuration is to be attributed to the phagocytic action of the blood-corpuscles as is taught by the Russian experimenter, or whether it is due to the antiseptic quality of the blood-serum, a later suggestion, I am not able to state—one case neither makes nor mars a theory. It is reported with the hope that it will evoke further light from others who may have secured primary union in amputation through suppurating surfaces, or wish to testify to its infrequent occurrence.

ULCERATIVE ENDOCARDITIS; AUTOPSY; REMARKS.[1]

BY FRANK R. ENGLAND, M.D.,
PROFESSOR OF PEDIATRICS, BISHOP'S COLLEGE, MONTREAL.

ULCERATIVE endocarditis is an interesting and somewhat uncommon disease; some peculiar characters in the following case make it worthy of report.

The patient, J. I. R., thirty-six years of age, was by occupation a locomotive engineer. His father died at the age of seventy-one years, his mother at fifty-four years; one sister died suddenly of heart disease, one living brother has aortic disease, and two sisters are alive and well. The patient has enjoyed the best of health until about two and a half years ago, when he had an attack of articular rheumatism, complicated by endocarditis, which kept him in bed for four weeks. At this time there was present a soft, blowing, diastolic murmur which was transmitted down the sternum and upward along the vessels into the neck. His recovery was apparently good, the murmur nearly disappeared, and he again became, as he was before the attack, a florid, robust-looking man, the picture of health and weighing over two hundred pounds. For the past two summers, beginning about the first of July, he has been annoyed with what he called "hay-fever," characterized by a catarrhal condition of the eyes and nasal mucous membrane, accompanied by sneezing and running at the nose. These attacks had no ill effect on his general health and the symptoms would disappear after a few weeks. During the winter of 1890 he was troubled a great deal by a dry, harsh and irritating cough that resisted all treatment, but disappeared in the spring. In the same year, about Christmas-time, his same annoying cough returned. Nothing in the way of treatment afforded much benefit, and, as the cough continued, his health and strength began to suffer. He lost weight and complained of night-sweats. Examination of the lungs at this time detected no signs of disease and only an occasional dry rhonchus could be heard. About the end of January matters were made worse by domestic affliction, during which time he lost much rest and sleep. He lost courage, became disheartened and obstinate, refusing further treatment, and persisted in continuing at his work, until March 10th, when he broke down. I was sent for and found him greatly changed in appearance. He was thin and worn-looking, and complained, on the least motion (on drawing a full breath, on coughing or sneezing), of great weakness and severe pain over the left lumbar region, making it quite impossible for him to turn in bed. The temperature was 101°, the pulse quickened. During the first six days of his illness his temperature ranged between 100° and 101°. The cough was troublesome, but there was no expectoration and no sign of disease in the lungs could be made out. I remembered his old rheumatic trouble, but had no definite explanation for the

[1] Read before the Medico-chirurgical Society of Montreal, May 1, 1891.

continued though slight pyrexia, the great weakness and nervous prostration present. The latter was proved by his wakefulness, the muscular tremor and irritability, the profuse sweats, whenever he happened to fall asleep, together with the persistency and severity of the lumbar pain. I was therefore compelled to look upon the case as rheumatic and to direct my treatment accordingly. The heart was daily auscultated, and during the first ten days of illness no evidence of acute disease was made out. After this, however, a harsh, loud, double aortic murmur developed and there was soon marked incompetency of the aortic valves, indicated by visible pulsation of the arteries of the head and neck. The symptoms that marked the case throughout were great prostration, violent paroxysms of coughing and profuse perspiration on falling asleep. The expectoration, which became profuse as the disease advanced, was at times clear and tenacious, and at other times sanious. A congestive bronchitis developed. In spite of a fairly good appetite and of apparently good assimilation of food, the patient became anemic, weaker and more emaciated. Owing to the cough, he could get little sleep or rest at night. Throughout the disease the temperature varied from 99° to 101°, the respiration from 36 to 46, and the pulse from 96 to 120. At no time was pain in the cardiac region or palpitation complained of. There were no rigors. Rheumatic pain and tenderness developed in the right shoulder, lasting for a few days during the third week, and there was some vomiting a few days before death, which, due to heart-failure, occurred rather suddenly April 23d, forty-four days after the patient took to his bed.

At different times during his illness the patient was seen by my friend and confrère, Dr. Hutchinson; Drs. Armstrong, Rodger and Geo. Ross also saw the case in consultation with me, and from the severe constitutional symptoms and great prostration all considered the cardiac lesion to be of a grave and destructive nature. The possible diagnosis of ulcerative endocarditis was entertained early in the disease and Dr. Ross, who saw the patient ten days before death, was strongly inclined to consider the case as one of malignant endocarditis, though there had been no rigors, no septic temperature and though it did not occur in the course of pyemia, pneumonia, scarlatina, diphtheria or ague, diseases in which, according to Osler, it is met with most frequently. The autopsy showed vegetations one-eighth of an inch long on the flaps of the aortic valves. In one of the flaps there was a perforation through which a bristle could be passed. This damaged condition, as pointed out by Osler and others, is a frequent concomitant. A stained microscopic section showed micrococci in moderate quantity. The aperture in the flap was, at the time of examination, blocked with recent lymph. Such a condition demonstrates the possibility of an intermittent diastolic murmur.

The American Electro-therapeutic Association will hold its first annual meeting at the hall of the College of Physicians, Philadelphia, September 24, 25, and 26, 1891. Dr. G. Betton Massey, of Philadelphia, will preside. An invitation of attendance is extended to physicians interested in the discussion of electricity in medicine.

ARTIFICIAL DRUMS.[1]

BY LAURENCE TURNBULL, M.D., PH.G.,
OF PHILADELPHIA, PA.

THE following list shows the various kinds of artificial drum-heads that up to the present time have been introduced: Moistened cotton pellet, Mr. Yearsley; rubber disc (Toynbee) with silver wire; cotton ball attached to thread; disc of adhesive plaster; disc of sublimated gauze, Dr. L. Turnbull; disc of oiled silk, Dr. C. M. Thomas; cotton pellet fixed by collodion, Dr. Barr; disc of sized paper, Dr. C. J. Blake; compound disc of India-rubber, cotton-wool and flannel, Mr. George Field; solid piece of India-rubber, Dr. Burkard Merian; India-rubber tubes as long as the canal, Professor Politzer; India-rubber disc attached to the tube, Professor Lucas; circular patch of pellicle of egg, Dr. Walter Downie; disc of stout linen with cotton thread soaked in vaselin, Dr. F. M. Pierce; cylinder of gold, Dr. H. B. Richardson; glycerin thickened with tannin, Dr. Michael; plug of boric acid powder, Dr. Farquhar Mattheson. Katz advocates celluloid drums, consisting of a disc of this material with a roll of wick of cotton attached to the centre as a handle. Ward Cousins has suggested antiseptic lint artificial membranes compressed or shaped like a hat with a handle. Attention was called to these, the most recent I have tested, but not with the satisfaction I expected.

Gross frauds are being practised by the sale of *fraudulent artificial membranes* to persons so profoundly deaf as really to require only a hearing trumpet; indeed, there is not one deaf person in fifty or even a hundred who is found, by careful examination of the ears, to be suitable for an artificial membrane, and yet I find all classes of deaf individuals are found filling the offices of quacks who, without even a glance into the the ears of these deaf patients, bring forth a box containing two artificial drums of rubber, with a handle of rubber and silk thread, and with a pair of small forceps, a bottle containing a mixture of glycerin, alcohol and ether, and a small rubber syringe, as the cure-all.

I present one of the most recent of the advertised sets of drums, which was purchased in Philadelphia recently by a patient of mine, from an individual from the "Nutmeg State." My patient was not able even to hear the tick of a clock or watch, yet she was not examined, nor allowed even to test the artificial drums until after paying for them. After testing them most carefully for two weeks, the person who sold them having by that time left Philadelphia, she sent them to me to be placed among my collection. I have carefully and conscientiously tested all the varieties of these drums, and do not find anything better in suitable cases than antiseptic gauze, wool, absorbent cotton, oiled silk or fine rubber. These are charged with liquid vaselin, with menthol—20 per cent. solution—and placed properly in the ear. In most cases they act as protectors—rarely, however, improving the hearing.

THE ABUSE OF SYRINGING WITH VARIOUS FLUIDS.

In some of the most severe and protracted cases of acute middle-ear disease which have been under my

[1] Delivered before the Medical Society of the State of Pennsylvania, at its meeting in Reading, Pa., June 5, 1891.

care or sent to us, either in children of scrofulous or tuberculous parents, the constant syringing with fluids—with irritant mixtures, or even impure water—is a most pernicious habit, and should be frowned upon. If a liquid is required, nothing should be employed but a solution of the peroxide of hydrogen, both for the nose and ears—one part of peroxide to three of distilled water. The ears should afterward be carefully packed with absorbent cotton and finely levigated boric acid, with a small quantity of menthol rubbed into the powder.

POWDERS FOR TREATING THE EAR.

Since the discovery and introduction of that most valuable agent, boric acid, by Betzold, numerous agents have been lauded for a time as being superior to it, as, for instance, "resorcin," and several others of the tar or coal derivatives; but, although praised by several aurists of Italy and of this country, they were found to exercise a most irritating and injurious influence upon the ear. Iodoform has been brought forward, and in proper and specific cases it is excellent, and although not a true antiseptic, has retained its place. This was followed by "iodol," which had a short life. "Aristol" is a new agent, and I would like to state that there are many objections to such fanciful names, when its own proper name is at once simple and descriptive. This agent has been highly praised by medical men in Europe and in this country. It was termed a universal curative agent in almost every disease. In skin disease it was stated to be wonderful, and pronounced harmless. In chronic rhinitis and in gynecological practice it was most favorably reported; also in ophthalmology and other branches of medicine. In ear disease I, with others, have given it a fair trial, but it has not been found a suitable remedy in my hands. It is a dithymol-diodide, or, more simply, an iodide of thymol, and is most simple in its preparation; it is made by adding a solution of iodine in iodide of potassium to an alkaline solution of thymol. Aristol only contains 45–48 per cent. of iodine, which is less than half that of iodoform; and while it does not follow that the substance containing the most iodine will be the best antiseptic, or even possess such properties in any degree, I know what iodoform is, and I think it may be fairly stated that aristol is not nearly its equal.

RUPTURE OF A DUODENAL ULCER.

BY C. A. HAMAN, M.D.,
RESIDENT PHYSICIAN OF THE CHILDREN'S HOSPITAL OF THE MARY J. DREXEL HOME.

THE following case, on account of its rarity and the difficulty of diagnosis, is deemed worthy of being placed on record:

D. M., aged ten years, had stumbled and rolled down a hill in the park. Within one-half hour he was taken to the Children's Hospital of the Mary J. Drexel Home. On admission he was found to be slightly dazed; his temperature was 101.4° F.; his pulse 110, and of fair volume; the abdomen somewhat tympanitic and tender on pressure; there was a small lacerated wound of the chin. About four hours after admission he began to get pale, the pulse became imperceptible at the wrist, the tympany and tenderness increased, and the respirations were very frequent and shallow. Repeated vomiting set in; the vomiting was not stercoraceous or bloody. The patient died within three hours after the symptoms of collapse presented themselves.

At the autopsy there was found a ruptured ulcer of the duodenum, situated about ten inches from the pylorus. The peritoneal cavity was full of intestinal contents. No blood was present, and no other ulcers of the intestinal canal were found. The mesenteric glands were enlarged. No other pathological changes or evidences of injury were found in any of the viscera. Prior to the accident the boy had complained of no symptoms referable to disease of the gastro-intestinal tract.

For permission to publish this case I am indebted to Dr. Carl Frese, Chief Resident Physician of the German Hospital.

NOTES CONCERNING THE TREATMENT OF LEPROSY.

BY W. THORNTON PARKER, M.D. (MUNICH), M.M.S.S.
OF SALEM, MASS.

IN an article on "The Treatment of Leprosy," in the July number of the *American Journal of the Medical Sciences*, Dr. Mitra recommended the use of gurjun oil, both internally and locally. I beg to submit the following treatment:

℞.—Quininæ sulph.	. . . . .	ʒss.
Tr. ferri chlor.	. . . . .	fl ʒss.
Syr. simpl.	. . . . .	fl ʒss.
Aquæ	. . . . qs. ad	fl ʒvj.

S.—One fluidrachm three times daily, ten minutes before meals.

℞.—Syrup. trifolii comp.

S.—Two fluidrachms half an hour after meals.

Locally, the glycoboron cerate (boroglyceride, 25 per cent.) may be applied. This ointment will be found peculiarly valuable in the treatment of the ulcerative stages of both the tubercular and the anesthetic varieties. Combining powerful antiseptic properties with its healing and soothing action, it is especially indicated to prevent fetor. It is less irritating and in every way superior to creolin. This combination of tonic, alterative and local antiseptic treatment is most confidently recommended. I have used this mode of treatment with excellent results in a recent case of chronic eczema, in which the face, trunk and extremities were simply covered by the disease. Within a short time the irritation greatly subsided, and the normal color of the skin is rapidly returning. After two or three weeks of the iron and quinine tonic treatment, I employ the new but reliable preparation of iron known as the elixir succinate. The general indications in the case of lepers are cleanliness, antiseptic applications, alteratives and tonics. This plan of treatment will, I am sure, be found at least as efficacious as that advocated by Dr. Mitra.

CURRENT LITERATURE.

THE PATHOGENY OF MALIGNANT JAUNDICE.

CARREAU remarks upon the analogy of the symptoms and lesions which exist in the grave jaundice of certain diseases engendered by very different causes, but which have, perhaps, as a final result an

identical chemical action upon the blood. Among these forms of jaundice, in addition to those which may be called essential, is that associated with poisoning by phosphorus, and those of yellow fever and the grave bilious fever, alongside of which may be classed that of the fever of the Creole children with black vomit. To these Carreau would add the grave jaundice of the fever with black urine (bilious hemoglobinuria), which, from its great resemblance to grave typhus, has received the name of "yellow paroxysms." Carreau thinks that this name should rather be reserved for the fever with black vomiting alluded to above. This fever is especially observed in Creole children under twelve years of age. On the third day albumin appears in the urine, and black vomit occurs, with a slight degree of jaundice, especially marked in the conjunctivæ, but at times scarcely apparent. This increases very much after death, which occurs on from the fifteenth to seventeenth day, after some ataxo-adynamic phenomena, with multiple hæmorrhages in the cellular tissue, especially of the digestive passages.

The diversity of the alterations in grave jaundice, as well as in yellow fever and phosphorus-poisoning, is the proof that the primordial lesion is a humoral alteration, and that the organs are affected secondarily, more or less, according to the degree of the gravity and the duration of the sickness. Thus, according to the rapidity with which death has occurred, various alterations will be found, from simple affection of the hepatic cells (the liver appears then scarcely altered to the sight) up to fatty degeneration and destruction of the cells in large number. The organ in this case appears to diminish one-half. Alteration in the kidneys progresses in proportion to the change in the liver, proving thus the existence of a general cause which acts upon these organs at the same time and in the same manner. But, whatever may be the duration of the sickness, there are some lesions which are always found to be the same. These are changes in the blood, and multiple hemorrhages which are the consequence of its alteration. Yellow fever, grave jaundice, phosphorus-poisoning, and the fever with black urine, all reveal a similar condition of the blood, with disseminated hemorrhages.

As to the pathogeny of grave jaundice, two factors are necessary—the blood and the bile—but experience has long since proven that the mixture of these two bodies is inoffensive. The symptomatic yellowness due to the biliary retention may last for weeks and months without altering sensibly the health, when, all at once, under some unknown influence, the phenomena of grave jaundice show themselves and carry off the patient in a few days. It is safe to say, with Trousseau, that one never knows how jaundice will end. As to what has brought the change, pathological anatomy, physiology and chemistry have sounded the problem in vain. Carreau has thought that neither the microscope, although it were extended to the utmost limits of vision, would comprehend the phenomena which occur within the organs, nor yet chemistry, which is still powerless to determine whether methemoglobin presents a degree of oxygenation less or superior to hemoglobin. He thinks, however, that a powerful method of research which is too much neglected, namely, the spectroscope, would reveal the phenomena in full formation. A mixture of fresh blood and bile presents the spectrum of hemoglobin and of the biliary pigments. If, now, this mixture be treated with ammonium sulphide, the spectrum of reduced hemoglobin is given at the same time that the obscurity of the biliary pigments persists. This is proof that the mixture of bile with blood, such as is observed in jaundice, is not noxious, but is reconcilable with relative health. Blood which is not fresh, but has been treated with the sulphide of ammonium, gives the spectrum of reduced hemoglobin at the same time that the band in the red disappears. This is the characteristic spectrum of acid methemoglobin. This same blood, with the addition of a small quantity of bile, submitted to the action of the reducer, still gives, with the disappearance of the band in the red, the spectrum of reduced hemoglobin, but with an interesting modification: the band of Stokes, in place of being uniform as usual, was scarcely shaded in its left three-fifths, and very pronounced, on the contrary, in its right two-fifths. With a larger quantity of bile a more remarkable result was obtained: the band of the methemoglobin always disappeared; in its place the band of reduced hemoglobin appeared, in the middle of which the first band of reduced hematin made its appearance. Agitation regenerated the oxyhemoglobin, which would replace at times the reduced hemoglobin, in the centre of which the reduced hematin would appear again.

Carreau concludes that since the bile exists in the blood permanently, the slightest cause tending to produce an irritation of the blood may give rise to the phenomena of grave jaundice. The blood has then undergone an alteration which has modified the hemoglobin and has converted it into acid methemoglobin. To avoid this grave accident he advises his patients afflicted with jaundice to avoid all fatigue and excesses and too sudden changes of temperature, and to wear flannel underclothing and woollen hose. Quinine is administered only in small doses, or if large doses are needed, they are given concurrently with the essence of ozonized turpentine to supply the oxygen which will be consumed in the conversion of a certain quantity of hemoglobin into methemoglobin by the action of the quinine.—*La Médecine Moderne*, No. 11, 1891.

A CASE OF WORD-BLINDNESS WITH AGRAPHIA.

DEJERINE, in a paper in *La Médecine Moderne*, No. 13, 1891, says that certain authors (Exner, Charcot) have admitted the existence of a special centre for the coördinated movements of writing, which centre is located in the posterior portion of the second frontal convolution of the left side. This localization is based upon the researches of Exner, but the facts upon which it rests are not absolutely demonstrative. The faculty of writing is directly subordinate to that of reading mentally. It consists only, according to the expression of

Wernicke, in the act of copying the optical images of the letters and words, and the movements of writing are in all points comparable to those which are necessary in copying any linear design whatever. But there is nothing to prove that the act of writing depends upon a special and autonomic centre which plays for writing the same *rôle* that the convolution of Broca does for the spoken language. To demonstrate the existence of an independent graphic motor centre it would be necessary to secure a clinical case of *pure, isolated agraphia*, followed by an autopsy, in which a minute anatomo-pathological examination would reveal as the only alteration a lesion of the presumed centre without concomitant lesion of the centres of tonal and optic memories or the convolution of Broca. But up to the present time no case of this kind has been reported; the rare autopsies of agraphia which have been published have all treated of complex clinical cases with extensive or multiple anatomo-pathological lesions.

The writer then reports a case of complete word-blindness with probable hemianopsia and agraphia. The patient was a gardener, sixty-three years of age, who at the age of fifty-six years had had a very slight attack of right hemiplegia, not accompanied by troubles of speech. In January, 1890, one morning he found that he could not read his paper, and on the 12th of February he was admitted to the ward of the hospital. At that time there was a scarcely appreciable paresis of the right arm and leg. The face was intact and also the general and special sensibilities. The patient showed no trace of word-deafness, but understood all that was said to him. He was unable to understand printing or writing. When presented a paper or written phrase, he would look at it for a moment and then say, "I do not understand it." He was also unable to name the letters (word- and letter-blindness). He was able, however, to read his name, and could recognize and name every object presented to him. There was some trouble with speech. The patient, either in the act of speaking spontaneously or while repeating some words, would take one word for another, so that at times it was difficult to understand him (paraphasia). He was unable to write anything except his own name, and held his pen as a child would who was learning to write for the first time. He was under treatment, with some improvement, until November 20th, when he died. The autopsy revealed a yellow plaque, localized on the lower three-fourths of the angular gyrus of the left side and terminating in a point in the external parieto-occipital fissure. The rest of the cortical surface was absolutely intact. The diseased mass penetrated in a conical shape into the subjacent white matter and divided the radiations of Gratiolet. In the right hemisphere were two spots of softening of the size of a small nut, one in the outer portion of the lenticular nucleus, the other in the anterior portion of the optic thalmus, by their union destroying the knee of the internal capsule.

Notwithstanding the clearness of the symptom of word-blindness, this case cannot be placed in the category of observations of word-blindness, pure and isolated, as reported by Charcot, Landolt, and others. In these cases the alexia was not accompanied by any trouble in writing; spontaneous writing, as well as writing from dictation, were performed easily. The patients wrote, but could not read. In the above case, however, the patient could not write at all. It is therefore a case of peculiar interest.

MEDICAL PROGRESS.

The Bacillus of Leprosy.—KANTHACK and BARCLAY (*British Medical Journal*, June 6 and 13, 1891), members of the Leprosy Commission, report the results obtained by attempts to cultivate the bacillus of leprosy by introducing into culture-bouillon bits of leprous tissue taken from the ears of lepers. Cover-glass preparations of the bouillon revealed free bacilli identical morphologically and in their reaction to stains with the bacilli of leprosy. Inoculation of agar and gelatin-tubes resulted in the formation of a pellicle in which similar bacilli were found. Potato and egg-cultures were unsuccessful. The results of inoculation in animals were yet to be determined.

RAKE and BUCKMASTER (*British Medical Journal*, June 27, 1891), also members of the Leprosy Commission, have succeeded in cultivating the bacillus of leprosy in serum from a blister. In two cases a blister was raised over a tubercle on the face of a leper and another blister over the normal skin of the back. A portion of the fluid from each blister was taken in a sterilized capillary tube, which was kept at the temperature of the body. Previous examination had shown that the fluid in a blister over a tubercle contained leprosy bacilli. On microscopic examination of stained preparations of the fluid placed in the tube, leprosy bacilli were found. Successful cultures were also made in bouillon, gelatin and agar.

The Detection of Oleomargarin.—LEFFMANN and BEAM have devised a modification of the Reichert distillation process for butter, that possesses the advantages of completeness and of being rapidly carried out. Saponification is effected by means of a mixture prepared by adding twenty-five c.c. of a clear 50 per cent. solution of sodium hydroxide to 125 c.c. of pure re-distilled glycerol, and boiling from fifteen to twenty minutes, to evaporate the greater portion of the water.

About five grams of the clear fat are weighed out in a flask in the usual manner, ten c.c. of the alkali-glycerol added, and the flask heated over a Bunsen burner. The mixture may foam somewhat; this may be controlled and the operation hastened by shaking the flask. When all the water has been driven off, the liquid will cease to boil, and if the heat and agitation be continued a short time longer complete saponification will be effected, the mixture becoming perfectly clear. The whole operation, exclusive of weighing the fat, will require less than five minutes. The flask is then withdrawn from the heat, and the soap dissolved in ninety c.c. of water. The first portions of water should be added drop by drop, and the flask shaken between each addition, in order to avoid foaming. When the soap is dissolved, fifty c.c. of diluted sulphuric acid—twenty-five c.c. of the concentrated

acid to the liter—are added, a piece of pumice dropped in the flask and the distillation conducted as usual, until 100 c.c. of distillate are collected.

Blank experiments have given a distillate requiring from 0.2 to 0.3 of deci-normal alkali.

For the identification of "straight oleos" it has been found sufficient to carefully measure three c.c. of the clear, melted fat, using one-half the quantity of the reagents.

The alkali-glycerol is quite viscid when cold. It should be kept in a flask closed with a rubber stopper and heated when the measured portion is to be taken.

The Relation of Acetonuria to Digestive Derangement.—As a result of observations in eighty cases at Nothnagel's clinic, at Vienna, LORENZ (*Zeitschr. f. klin. Med.*, Hefte 1, 2, 1891) concludes that acetonuria is so constant in cases of digestive derangement of varied kinds as to be considered characteristic. A distinction between diaceturia and acetonuria cannot be made, because the variation in clinical symptoms is slight and quantitative, and in most severe cases a combination or alternation of the two conditions is the rule. The symptoms heretofore ascribed to the action of acetone or of diacetic acid are probably produced by the action of toxic substances the conversion of which into acetone has been checked by imperfect oxidation. Albuminuria, present in some cases, did not appear to be dependent upon the action of acetone or of diacetic acid. Acetone, in varying quantity, was found in the contents of the stomach and intestines. In cases of primary gastro-intestinal catarrh, acetone was almost invariably found in the contents of the stomach and intestines; in secondary catarrh, usually nervous in character, the presence of acetone was exceptional. In two cases, one of uræmic vomiting and one of hysteria with intestinal symptoms, in addition to acetone and diacetic acid, oxybutyric acid was also found in the urine.

Dermatol—a Substitute for Iodoform.—HEINZ and LIEBRECHT (*Berliner klin. Wochenschr.*, June 15, 1891) have given the name dermatol to the basic gallate of bismuth, which is said to be a fine, odorless, insoluble, saffron-yellow, non-hygroscopic powder, unchangeable by air or light. The remedy has been used with good results in surgical, gynecological and dermatological practice. It commends itself as an innocuous, sedative, antiseptic drying powder.

Treatment of Congenital Ptosis by Means of Naphtholated Catgut.—DRANSART has devised an operation for the relief of congenital ptosis, in which an artificial tendon, created from the frontal muscle, takes the place of the absent or atrophied levator palpebræ. The new tendon is made by means of subcutaneous sutures uniting the superior border of the tarsal cartilage with the superciliary muscle. The success of the operation depends upon the asepsis of the sutures and placing them in the deep, connective-tissue layer of the skin. Sterilized catgut has answered admirably, except that it is absorbed in the course of two or three days, while twelve to fifteen are required to obtain a suitable artificial tendon. DEHENNE has found that by preparation with a solution of naphthol the rapidity of absorption of catgut may be sufficiently retarded so as not to jeopardize the success of the operation. He reports a case in which the result obtained was excellent.—*Journal de Méd. de Paris*, May 24, 1891.

Hyperemesis Gravidarum.—In an address before the Obstetrical Society of Berlin, KALTENBACH (*Zeitschr. f. Geburtsh. u. Gynäkol.*, Bd. xxi. p. 200) expressed the view that the obstinate vomiting of pregnancy was hysterical, pregnancy acting as a peculiarly favorable exciting cause of hysteria. The view is supported by the perverse aversions and sensations, the sensory disturbances, the psychic irritability and depression, and the secretory vasomotor anomalies that accompany equally pregnancy and hysteria. It thus follows that the induction of premature labor should be reserved as a last resort. The treatment should be rigidly anti-hysterical: the administration of bromides, the application of cold douches and change of surroundings.

Hairy Tumor in the Stomach.—BOLLINGER (*Münchener med. Wochenschr.*, June 2, 1891) reports the case of a girl, sixteen years old, who, for two and a half years, had presented symptoms of gastro-intestinal catarrh—anorexia, vomiting, abdominal pain and chilliness; the stools became liquid; there was insomnia; ultimately only liquid nourishment could be taken; a hard tumor was detected in the epigastrium; death finally resulted from exhaustion. At the post-mortem examination the stomach and duodenum were found distended with a great mass of hair. It was subsequently elicited that, as a child, the patient had been in the habit of pulling out hairs and drawing them through the mouth, though she had not been known to swallow any. Records of but eight other cases of the kind have been found in literature. The majority occurred in females. Analogous conditions have been found in dogs, in ruminants, in pigs and in horses.

Injections of Strychnine for Diphtheritic Paralysis of the Palate.—ROSENZWEIG expresses surprise that the treatment of diphtheritic paralysis by injections of strychnine is so little known. His own attention was attracted to the method by a publication by Henoch's. Rosenzweig reports four cases of diphtheritic paralysis of the palate which he has treated successfully with hypodermatic injections of strychnine. Three of the patients were girls, and one was a boy; the ages ranged from six to twelve years. The usual symptoms of palsy of the palate—nasal voice and regurgitation of food through the nostrils—were present. The neck was selected as the place for the injections, the dose given being from two to three milligrams ($\frac{1}{33}$ to $\frac{1}{10}$ of a grain), and it was repeated daily. In the first case the nasal speech and difficulty in swallowing disappeared after five injections, but the patient seems to have remained under the strychnine treatment, combined with tonics, for twenty days. In the second case the patient recovered in nineteen days. In the third case all paralytic symptoms disappeared in nine days, while in the fourth case the paralysis of the palate was overcome after three injections. Nothing is said to indicate that there were any bad effects from the doses of strychnine employed, though they are rather large for children.—*Therapeutische Monatshefte*, April, 1891.

THE MEDICAL NEWS.

A WEEKLY JOURNAL

OF MEDICAL SCIENCE.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed exclusively to THE MEDICAL NEWS will upon publication be liberally paid for, or 250 reprints will be furnished instead of payment. When necessary to elucidate the text, illustrations will be provided without cost to the author.

Address the Editor: GEO. M. GOULD, M.D.,
1004 WALNUT STREET,
PHILADELPHIA.

Subscription Price, Including Postage in North America.

PER ANNUM, IN ADVANCE . . . . . $4.00.
SINGLE COPIES . . . . . 10 CENTS.

Subscriptions may begin at any date. The safest mode of remittance is by bank check or postal money order, drawn to the order of the undersigned. When neither is accessible, remittances may be made, at the risk of the publishers, by forwarding in *registered* letters.

Address, LEA BROTHERS & CO.,
NOS. 706 & 708 SANSOM STREET,
PHILADELPHIA.

SATURDAY, AUGUST 1, 1891.

MEDICAL ADVICE WITH MEDICINES AT SEVENTY-FIVE CENTS A YEAR.

IN the last number of a highly esteemed English exchange there is a very suggestive letter from a correspondent, who frankly confesses that he is regularly attending children at the rate of fifty cents a year, and adults at seventy-five cents a year, medicines included, and he is doing this even though the patients live three miles away. The writer justifies himself in this way:

"I think we may justifiably feel some pride that we have a higher aim than simply working for pay, and that the care and attention which we give to any particular patient is not governed by the amount of the fee. What shall be said of the hospital physician who gives his services for nothing at all? often thereby depriving the humbler practitioner of patients who could well afford to pay a moderate fee. Besides, is there any greater dignity in demanding a higher than a lower fee? Is there any dignity in taking fees at all, or is the whole of the nobility and dignity dependent on the spirit in which the work is done?"

This defence gives glimpses of certain characteristics and social conditions of English life that provoke sad and serious thoughts. It also stimulates questions as to the beam in our own eye. With us there is certainly not any such widespread poverty as that of which we catch the hint between the lines of the correspondent. It is commonly said that as yet in America one can make a decent living by the practice of medicine, without stooping to the five or ten or twenty-five cent fees not uncommon in England.

But with us there are several considerations to modify our self-content. First, it may be noted that gratuitous treatment at the private office is very much more common with us than in other countries. It comes natural to the American character to ask a good-sized fee, or be quite as willing to let the service go purely *gratis*. We consider compromise beneath our dignity. It is said that a friend of a prominent New York lawyer sent the legal light a check for $500 in gratitude for a bit of advice incidentally given with a passing handshake. The check was returned with the curt reply that his smallest fee or retainer was $1000. In medical practice there are similar habits of thought and feeling, and the average of fees and non-fees greatly reduces the supposed regular charge.

In the next place, the thin edge of the wedge is being driven in much faster than is commonly confessed or generally known. It is true that homeopaths are very numerous who give advice and medicines for fifty cents a visit, and not infrequently for twenty-five cents. Willingly or unwillingly, physicians are forced to compete by "meeting" the quack's price.

Another phase is shown in the formation of medical clubs. These are not at all uncommon, and a doctor is hired by the year at a very low rate. Various fraternal organizations succeed by this plan in getting their members and the families of their members treated for merely nominal fees.

The next step in the *descensus Averni* is that taken by the drug-store doctor. The writer once saw a physician enter his drug-store, and passing along the rows of waiting patients briefly learned the symptoms each complained of, in the presence and hearing of all the others. He then prescribed, and the prescription was at once handed to the clerk. There was no charge for the advice or prescription, the medicine alone being charged for. Sometimes the doctor has a private office behind or within the store. More rarely the office may not be connected with the store.

The dispensing druggist must not be forgotten. However undignified, and even illegal, this method of evading the physician may be, it is wretchedly

common. "Give me something for my headache," "for rheumatism," "for stomach-ache;" "give me a dose of antipyrin," "of chloral," etc., are the demands made of the druggist many times every day. He rarely refuses.

The last and lowest depth is the hospitals and dispensaries, emulous of each other, and running a competitive race for patients. In the letter of our New York correspondent published July 18th we see how the patronage of well-to-do people is sought by the attendants of clinics founded "for sweet Charity's sake," medicine and advice being dispensed gratuitously to those with no claim or right to them, to the degradation of the patient, with injustice to the young and struggling physicians, and in defiance of the objects of those bequeathing the funds. As regards a large proportion of American out-patients it must be admitted that they are well able to pay something for their medical treatment, however small the amount might be. The self-respecting visiting and resident physicians of these charitable institutions should spontaneously do away with the abuse, and form rules and establish habits that will bar out those that could pay. It is quite beyond comprehension that members of a noble guild like ours should be so destitute of *esprit de corps*, so reckless of the wrong done the younger members of the profession. Unless reform come spontaneously and quietly, it must sometime come from without and brutally. Those who supply the funds will learn of the way their charity is being used to wrong both patient and physician, and supplies will stop with a suddenness born of righteous indignation, but necessarily followed by other evils. Moreover, young physicians would be better than human if they stood calmly by and allowed their proper *clientèle* to go in crowds to the dispensaries and hospitals to be treated gratis by men whose practices are established. They will meet such useless and brutal competition by establishing other and rival institutions, or by taking up one or more of the methods before described. These things, as we have tried to show, are already well under way, and with true American earnestness, pushed by the facts of a rapidly increasing proportion of practitioners to population, as also by the growing poverty of the city masses—when war is fully declared, it will not be exactly "war with rose-water." The net result will be a sharp lowering of professional dignity, a ruinous cutting and reduction of professional fees, and the further entrance into medicine of commercial customs and auctioneer methods.

In the meantime, will those who have the remedy in their hands remain satisfied to let things drift, and drift, and still drift?

DRUMMERS FOR DOCTORS.

WE rubbed our eyes, re-cleansed our spectacle-lenses, looked again at the journal cover, made sure it was not a summer theater we were in—but had at last to confess that the words stood as given below. The periodical is "our esteemed contemporary," *The Journal of the State Medical Society of Arkansas*, and in its "Miscellany" there appears without comment or explanation the following:

"LIST OF DRUMMERS FOR DOCTORS IN THE CITY OF HOT SPRINGS, ARK., TO WHOM LICENSE HAS BEEN ISSUED IN CONFORMITY TO AN ORDINANCE PASSED JUNE 17, 1889."

Since we do not wish to give a free advertisement to these gentlemen we can only explain that the list comprises the names of twelve doctors, each followed by the names of his "drummers." One doctor has but one drummer, five have two, one has three, two have five, one has six, one ten, and one has eleven — fifty-one men "touting" and "heeling" for the doctors of one small town!

The City Clerk swears the list is a true abstract of the office records, and a note appended explains that the "hotel and doctor drummers" are by ordinance required to take out a license and wear badges showing their vocation. (What excellent devices and mottoes for these drummers' badges might be found in the medieval "Dances of Death," or copied from the old Flemish painters of resurrection scenes. Picture, for example, the fright and resistance of some fleshless, sin-eaten old *roué* being pulled with frolicsome fury by a dozen satanic minions, happy at last in securing their long-awaited prey!)

Will our contemporary inform us if the undertakers of the city also have "drummers," and if these ply their persuasive powers upon all invalids arriving at Hot Springs? And finally, it might be well to know if the city cemetery is a stock company, and how many shares are owned by the "doctors" and their "drummers."

What a fine hint the report might give Gilbert and Sullivan, or the concocters of modern opera bouffé run mad! Can anything be imagined more uproariously funny?

But there is a mawkish suggestiveness in it that reminds one somewhat of the clown that laughed, and laughed, and laughed again, simply at the thought that the devil had him by the ear and that he was at last and actually being marched straight to—hell!

HUMAN VIVISECTION.

SOME three years ago HAHN,[1] a Berlin surgeon, reported the experimental inoculation of six pieces of carcinomatous tissue taken from one breast of a woman and transplanted into the other breast. In fourteen days the grafts had united, and in four weeks the microscope showed the tissues about the transplantations to be carcinomatous. Strangely enough, this observation seems to have passed unnoticed and uncondemned even by those that are now very properly shocked at recent similar procedures. Latterly, according to the daily papers, Dr. LEIDIG, of Berlin, charges Dr. BERGMANN and Dr. HAHN with having performed repeated experiments of the same kind, and, if the newspaper report can be trusted, Dr. BERGMANN thus meets the threatened official inquiry:

"My conscience does not reproach me in the slightest experiment. I have not inflicted on the patients a moment's pain nor shortened their lives a minute. This outcry has not affected my practice. My patients are arriving from all parts of the world."

Again, in the Paris Academy of Medicine, PROFESSOR CORNIL has just reported two similar inoculation experiments, performed in Paris, "by a stranger," upon two women, while anesthetized and without their consent.

These things are, happily, at last arousing a cry of indignation throughout the civilized world. If an enemy of modern scientific medicine can be supposed to exist, he could not inflict upon her a more diabolically effective blow than is thus given by members of her own household and faith. Fanatics will pounce upon these facts and use them with all the zeal of half-knowledge and the fury of unrestrained sentimentalism.

It is indeed astonishing that a great surgeon should calmly dare the indignation of the civilized world and justify his course by his lack of conscience and his worldly success.

We hope later reports will bring better news and show that not even one physician has been so thoughtless of the good of his guild, and so reckless of his own final fame as to give utterance to such "noon-day vices and brazen-browed iniquities."

[1] Berl. klin. Wochenschr., May 4, 1888.

HOMEOPATHIC LAWS.

IN reference to the communication of our correspondent, inserted elsewhere in the current number of THE NEWS, we would add a word as to the essentially unscientific attitude of mind evinced in the tacit assumption that a therapeutist must be governed by any so-called "laws" whatsoever. The scientific type of mind knows nothing, and will not allow itself to know anything, concerning any law of "similars" or of "contraries." It forms judgments only upon evidence, without the domination of any deductive law or principle. It seeks physiological results, whether obtained by small or by large quantities of a drug. The fundamental reason that sincere homeopathy is a disgrace to modern civilization, and must eventually be buried in deserved oblivion, is that in method it is deductive instead of inductive, that it is pursuing the chimeras of a crazy medievalism and of metaphysical will-o'-the-wisps, instead of seriously seeking to know facts and to understand their lessons.

But above and beyond the type of homeopathy that is sincere there is the type that is insincere. The cunning sharper is more dangerous and execrable than the foolish weakling, and it cannot be doubted that the number of those that believe and practise HAHNEMANNIAN homeopathy is extremely small as compared with the great majority of those that neither believe nor practise the follies that their foolish patients think supremest wisdom. If the imbecilities of speculative homeopathy are disgusting, the hypocrisy that for gain pretends to believe them is a stench in the nostrils of all good men.

CORRESPONDENCE.

MONTREAL.

Visit of Mr. Ernest Hart—Branch of the British Medical Association—Changes in the Staffs of Medical Schools—Medical Education of Women—An Interesting Medico-legal Question.

MR. ERNEST HART, the well-known London surgeon and editor of the *British Medical Journal*, accompanied by his distinguished wife, has been "doing" the country, and spent a few days in Montreal. He was taken in hand by Dr. Hingston, of the Hotel Dieu, and matters of interest, scientific and general, pointed out to him, and every attention was shown him to make his short visit pleasant. He was dined at one of our fashionable clubs. A hurried meeting of some of our leading medical men was held in the rooms of the Medico-chirurgical

Society, and Mr. Hart explained the working of the British Medical Association, the largest medical corporation in the world. Branches throughout the Empire are in existence, and one was suggested for Montreal. As a result of this meeting, a number of names were given in and a branch decided upon. Dr. Hingston is to be President, and J. Chalmers Cameron, M.D., Secretary. For the annual subscription fee of $5.25, the substantial return of a copy of the great London weekly, the *British Medical Journal*, is assured to each member.

The teaching season being over, the usual European trip is being indulged in by several of our well-to-do M.D.'s. Next fall a good deal of change will be noted in the staffs of our four medical schools. At McGill, pathology is to have a chair and a salaried professor. The work has heretofore been done by a lecturer, Dr. Wyatt Johnson, who recently resigned. Dr. H. A. Lafleur, for some time first assistant to Dr. Osler in Baltimore, has returned to his alma mater, and will assist Dr. Geo. Ross, sub-dean, in the work of clinical and didactic medicine. At Bishop's College, Dr. Lapthorn Smith takes the chair formerly occupied by the late Dr. E. H. Trenholme. The long-expected amalgamation of the Montreal School of Medicine with Laval University is now accomplished, the necessary legislation having been secured. Dr. L. B. Durocher is to be President, and Dr. H. E. Desrosiers, Secretary, of the new Faculty. The difficulty of accommodating two sets of professors in one row of chairs has been met by the offer of a solatium of a financial character to those who by choice or necessity retire. The amount will be, according to report, four dollars per lecture hour.

A curious thing occurred recently, having a bearing on the medical education of females. McGill, it is well known, is opposed to the admission of the ladies, and at the Montreal General Hospital tickets were refused to female medical students, the influence of McGill being very strong in that corporation. At the last quarterly meeting of the governors, a motion was made to grant a clinical ticket to one of the female applicants. At once violent opposition was offered by medical and lay members of the Committee of Management, with threats of resignation, and the motion was lost. The friends of the ladies did not have long to wait, however, for in less than a week the ticket was granted. In explanation of this sudden turn about, it was admitted that danger to the subscription-list had loomed up so distinctly after the vote as to prove an effectual eye-opener. As the hospital is, in a measure, dependent on the yearly subscriptions, the wishes of the suppliers of the financial sinews cannot be ignored.

A case of much interest, alike to medical men and pharmacists, has just been before the courts. Some months ago, a French medical practitioner of the city had a case of pertussis under treatment, and decided to exhibit bisulphate of quinine. He prescribed for the patient, a young infant, one-quarter-grain doses, in powder. By inadvertence, he wrote the prescription bisulph. *morph.* The chemist, finding morphia clearly written, dispensed the only sulphate of morphia found in commerce, naturally supposing the *bi* to be a debatable chemical prefix of no therapeutic influence. The child was taken to the country, and the powders soon did their deadly work.

The physician, without having seen the child, granted a certificate of death from whooping-cough. Subsequently, another child of the family having acquired the malady, the father consulted the doctor again, and was advised to make use of the remaining powders. The administration to the second patient having produced symptoms which reminded the parents of the previous fatal case, they became alarmed, and expressed their fears to the doctor that something was wrong with the medicine. The matter was then looked into, and the real state of things discovered. The father brought suit jointly against the doctor and druggist for the death of the child. The doctor sought to lay the responsibility on the druggist, claiming that the dispensing of a *bi*sulphate for a sulphate was an improper substitution. The druggist pleaded that the dispensing of a sulphate for a non-existent bisulphate was customary, and showed in evidence that a prescription purposely written *bi*sulph. had been presented in eleven first-class pharmacies in different cities—New York and elsewhere—and in every case but one the ordinary sulphate was dispensed without hesitation; in the only one refusing, the clerk had heard of the present case, and said so.

Judge Jetté held both defendants culpable, giving judgment against the doctor for $250 damages, and against the druggist for $50. After taking counsel with other judges, he had decided that the least deviation from strict regularity in the wording should have led the druggist, previous to the dispensing of a poison, to take the extra precaution of consulting the writer of the prescription.

Some of the lessons from this sad case are obvious enough. The giving of a death-certificate without seeing the patient cannot be approved. When a prescription calling for morphia or other strong poison is presented at the dispensing-counter, the precautionary inquiry, "Is this for an adult or for an infant?" would be wise.

HOMEOPATHY.

To the Editor of THE MEDICAL NEWS,

SIR: *Re* your editorial on "The International Homeopathic Convention." Let me premise that I am a regular or rational physician, the son of a regular or rational physician, that I have subscribed for and read your periodical for nearly a quarter of a century, and am a member of the Canada and the Ontario Medical Associations. Thus much for my orthodoxy.

Several years ago exigencies of practice which it is not necessary to particularize convinced me, much against my will, that in several instances homeopathic therapeutic measures had succeeded when regular school therapeutic measures had failed. I began to investigate and test, and think that possibly my conclusions and ideas would prove of interest to some of your readers, though from the tenor of your editorial I would hardly expect them to interest you.

1. There are two distinct classes of homeopathic practitioners—the high and the low dilutionists—besides the division into educated and uneducated common to all civilized society.

2. That the high dilutionists accept and believe, or pretend to accept and believe, all the absurdities and

senseless drivel of homeopathy. They are analogous to the class in our own school who are, or pretend to be, carried away by such fads as Brown-Séquard's elixir of life. The low dilutionists are, many of them, honest, intelligent, and shrewd men that have grasped the fact of what is known as the law of similars, but have unfortunately jumped to the conclusions, that this law is universal—which is not proved, and that it is the only therapeutic law worthy of consideration—which we know to be false.

3. Homeopathy is an enormous balloon inflated by gas emitted from one or two genuine therapeutic principles, and the regular school is stupid enough to be scared by the size of the bag, at the same time trying to believe that the contained gas has no origin in fact.

4. It would be much better for medicine and humanity for the regular school to cause the balloon to collapse by boldly accepting the law of similars, the minute dose, and the dynamic power of trituration as true within the limits of proof, and adopt them as parts of our therapeutic armamentarium, instead of blindly groping for them while denying their existence, as our therapeutic leaders, Brunton, Bartholow, and Ringer, are doing.

5. That these principles are true within certain limits is demonstrable. Elaborate proof cannot be submitted here, but consider mercury alone—of which Dr. Ringer says: "It is singular how similar the phenomena produced by mercury are to those which result from syphilis." In this he merely echoes his predecessors, for years ago Stillé wrote: "Alterative medicines act in a great degree in the same direction as the diseases which they cure; mercury, for example, tends to produce lesions which bear a close resemblance to, if they are not identical with, those caused by syphilis." Thus much for the law of similars. As to the change in function and increased power produced in drugs by trituration, called by homeopaths "dynamization," consider the effect of two or three ounces of crude mercury in the alimentary canal, in connection with the effect of half a dram of the same metal triturated and exhibited—*per os*—in the form of blue mass. Call it what you please, dynamization, demonization, or what not, the increased power and change of function produced by the trituration is an entity.

6. There is absolutely no reason why any physician should not treat one patient upon the principle of the law of contraries and its necessarily large doses, and his next patient upon the principle of the law of similars and its necessarily minute doses, as may seem good in his eyes—provided always he has enough intelligence and knowledge to know which principle he is using at any given time. Instead of doing as even some leaders in therapeutics do now-a-days, who, having seen a drug succeed upon the principle of the law of similars in a minute dose, adopt it and prescribe it in large doses. See our use of pulsatilla.

7. If this straightforward course was pursued it would tend strongly to the rationalization of therapeutics and the extinction of homeopathy as a distinct school of medicine.

My positive statements are excused by my premising that they are merely *my* conclusions and ideas. Yours, etc.

GEO. M. AYLSWORTH.

COLLINGWOOD, ONT., Second Street cor. Pine.

ATMOSPHERIC CONDITIONS AND PNEUMONIA.

To the Editor of THE MEDICAL NEWS,

SIR: On page 20 of THE MEDICAL NEWS of July 4th is a brief editorial on "The Etiology of Croupous Pneumonia," summarizing results of the study of one hundred cases. Although this is too small a number to base conclusions upon, it seems to me probable that the conclusions (which are there tentatively suggested) are correct, because in the main they agree with those published in the *Annual Report* of the Michigan State Board of Health for the year 1886, based upon a study of very much larger numbers of cases and of deaths—namely, over 500 deaths from pneumonia in Michigan, 11,000 in the United States armies, 4000 in the European troops in India, 6000 in the native troops of India, 114,000 in London, England; nearly 1000 cases of sickness from pneumonia reported to the Collective Investigation Committee of the British Medical Association, 49,000 cases of sickness from pneumonia in the United States armies, and 31,000 weekly reports of sickness (including pneumonia when present) under the observation of the representative physicians in Michigan.

Herewith I send you a reprint of the article, in which are tables and diagrams graphically illustrating the same, showing the very close relation of pneumonia to temperature and humidity of the atmosphere, and to the daily range of atmospheric pressure (conditions mentioned in your brief editorial), and also to atmospheric ozone and to wind. In the article on "The Causation of Pneumonia," here referred to, I claimed that "the causal relation of atmospheric temperature is now established. I believe it is a general law, applicable throughout the world." Very respectfully,

HENRY B. BAKER.

NEWS ITEMS.

The Fiske Prize.—The Trustees of the Fiske Fund have awarded a prize of $300 to Dr. Robert W. Lovett, of Boston, for an essay on "The Etiology, Pathology and Treatment of the Diseases of the Hip-joint."

The Case of Mr. W. H. Gladstone.—As reports, more or less inaccurate, have appeared in the daily papers concerning the illness of the late Mr. W. H. Gladstone, we are glad to be able to state the actual facts. Mr. Gladstone five years ago showed the symptoms of the commencement of the growth of a cerebral tumor. These symptoms consisted in the most remarkable localized epileptiform seizures, followed by motor aphasia and paralysis of the right arm and leg. The hemiplegia and other symptoms gradually became more pronounced during the last few years. The history of the case tended to show that the growth was non-malignant, and a very prolonged course of iodide of potassium and mercury produced no amelioration in the condition. Quite recently a consultation was held between Sir Andrew Clark, Dr. Hughlings Jackson, Dr. Ferrier, Mr. Horsley, and Dr. Prickett. The result of this consultation was the opinion that an exploratory operation might be undertaken with the view of ascertaining whether the tumor could be removed, and to relieve pressure. At the same time it was pointed out that possibly it was too

deeply seated and too extensive for safe removal. On this understanding the operation was performed, but, although Mr. Gladstone recovered from the effects of the chloroform, his strength did not enable him to rally from the shock, and he slowly sank. It was found that the severe and prolonged pressure had flattened the medulla oblongata and basal structures.—*British Medical Journal*, July 11, 1891.

John Frederick Groenevelt.—The Surgeon-General of the Marine-Hospital Service has issued the following circular:

It becomes my sad duty to announce the death from yellow fever of Assistant Surgeon John F. Groenevelt, at the United States quarantine station, Chandeleur Islands, Gulf of Mexico. He was taken sick on the 18th of June, while in the active performance of quarantine duty, and died on the night of the 29th.

Assistant Surgeon Groenevelt was born in Leipzig, Germany, July 19, 1865, of American parents. On his father's side he was a descendant of Baron Arnold de Groenevelt, of Netherlands fame. His mother is a native of Louisiana. In 1878, at the age of thirteen, he entered the Tulane University, in New Orleans, and remained for seven years a student in its academic and collegiate departments, during which time he received the Greek medal, the Latin medal, the medal for mathematics, and the ancient-history medal. In 1884 he received the degree of Bachelor of Arts, and was elected president of the academic corps by the students, a place requiring tact and firmness in enforcing the discipline of the institution. In 1885 he received the degree of Master of Arts, and at once began the study of medicine under Dr. F. Loeber, of New Orleans, as preceptor. After four years of study in the medical department of Tulane University, he was graduated April 23, 1889. In 1886, while still a student, he was made interne of Touro Infirmary, and in 1887, after a competitive examination, was appointed interne in the Charity Hospital, of New Orleans, which position he filled with credit for a period of sixteen months, resigning to accept a similar position in the U. S. Marine Hospital, in the same city. Subsequently he accepted a remunerative offer as physician to a portion of the engineer force of the Mississippi River Commission, and was stationed at the Government works on the Atchafalaya River.

He was appointed Assistant Surgeon to the Marine-Hospital Service July 11, 1889, after a competitive examination, passing No. 1 in a class of twenty-six candidates.

As an officer, Assistant Surgeon Groenevelt was held in high esteem, both by those under whose immediate command he served and by the Department. His ability is illustrated by the varied and important trusts that were confided to him, and his courage by his readiness for service in the position in which he lost his life. He had shown an inclination and special aptitude for quarantine duty, and in this branch of the service his loss, for public reasons, is particularly deplored.

Personally, Dr. Groenevelt was endowed with a high sense of honor, a general culture, and scientific attainments that won for him the attachment and respect of those with whom he was brought in contact. To his bereaved father and mother, and other near relatives, I have assumed to extend the sympathy of our corps. The service has lost a young and brilliant officer, and the public an able and earnest devotee in the cause of public health.

It is hereby ordered that the flags at the Gulf quarantine station, Chandeleur Islands, be kept at half-staff and half-mast for a period of thirty days, and that the officers there on duty wear the usual badge of mourning for the same period of time.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JULY 21 TO JULY 27, 1891.

ROBERTSON, REUBEN L., *Captain and Assistant Surgeon.*—Ordered, for duty, to Fort Niagara, N. Y., on the abandonment of Fort Abraham Lincoln, North Dakota.

KNEEDLER, WILLIAM L., *Assistant Surgeon.*—Granted leave of absence for one month.

TILTON, HENRY R., *Surgeon.*—Granted leave of absence for two months, on surgeon's certificate of disability.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING JULY 25, 1891.

FIELD, JAMES G., *Assistant Surgeon.*—Ordered to special duty in the Bureau of Medicine and Surgery.

HOPE, JAMES S., *Assistant Surgeon.*—Ordered to the Receiving-ship "Franklin."

MORRIS, LEWIS, *Assistant Surgeon.*—Ordered to the "Ajax" and other monitors, Richmond, Va.

KEENEY, JAMES F., *Assistant Surgeon.*—Promoted to Passed Assistant Surgeon.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE-HOSPITAL SERVICE, FOR THE THREE WEEKS ENDING JULY 18, 1891.

MURRAY, R. P., *Surgeon.*—To proceed to Gulf Quarantine, for temporary duty, July 1, 1891.

SAWTELLE, H. W., *Surgeon.*—Relieved from duty at Portland, Me.; ordered to Boston, Mass., July 11, 1891.

IRWIN, FAIRFAX, *Surgeon.*—When relieved at Boston, Mass., to proceed to Buffalo, N. Y., for temporary duty, July 11, 1891.

CARTER, H. R., *Passed Assistant Surgeon.*—Ordered to Washington, D. C., for temporary duty, July 2, 1891.

PECKHAM, C. T., *Passed Assistant Surgeon.*—Granted leave of absence for seven days, June 30, 1891.

DEVAN, S. C., *Passed Assistant Surgeon.*—When relieved at Buffalo, N. Y., to proceed to Portland, Me., for duty, July 11, 1891.

BROOKS, S. D., *Passed Assistant Surgeon.*—Granted leave of absence for thirty days. July 13, 1891.

KINYOUN, J. J., *Passed Assistant Surgeon.*—Granted leave of absence for thirty days, July 14, 1891.

HOUGHTON, E. R., *Assistant Surgeon.*—To proceed to Cleveland, Ohio, for temporary duty, July 8, 1891.

DEATH.

GROENEVELT, J. F., *Assistant Surgeon.*—Died of yellow fever, at the Gulf Quarantine Station, June 29, 1891.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed exclusively to THE MEDICAL NEWS will upon publication be liberally paid for, or 250 reprints will be furnished instead of payment, provided that the request for reprints be noted by the author at the top of the manuscript. When necessary to elucidate the text, illustrations will be provided without cost to the author.

Address the Editor: GEO. M. GOULD, M.D.,
1004 WALNUT STREET,
PHILADELPHIA.